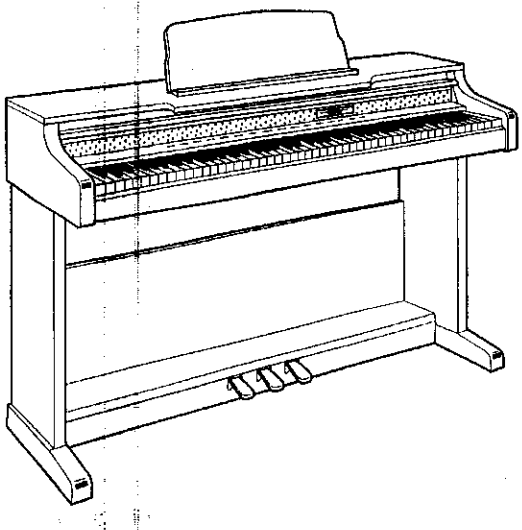
ORDER NO. EMID9902003C0
A4

Service Manual

Digital Piano

SX-PX336/PX336M



AREAS

(M): U.S.A.
(MC): Canada
(XM): Mexico
(EN): Norway, Sweden, Denmark, Finland
(EH): Holland, Belgium
(EF): France, Italy
(EZ): Germany
(EW): Switzerland
(EA): Austria
(EP): Spain, Portugal, Greece, South Africa
(EK): the United Kingdom
(XL): New Zealand
(XR): Australia
(XS): Malaysia
(XD): Saudi Arabia, Hong Kong, Kuwait
(XT): Taiwan
(X): Thailand, Indonesia, Iran, U.A.E., Panama, Argentina, Peru, Brasil
(XP): Philippines
(XW): Singapore

■ Specifications

KEYBOARD	88 KEYS
SOUND GENERATOR	PCM
MAX. POLYPHONY	64 NOTES
SOUND	350 SOUNDS: GRAND PIANO, UPRIGHT PIANO, ELECTRIC PIANO, MODERN PIANO, HARPSI, VIBES, STRINGS, VOCAL, ORGAN PRESETS, GM/OTHERS
SPLIT	LEFT SOUND, SPLIT POINT, LEFT VOLUME, LEFT OCTAVE, RIGHT OCTAVE, SUSTAIN PEDAL
PEDAL	SUSTAIN, SOSTENUTO, SOFT
EFFECT	DIGITAL EFFECT, PIANO AMBIENCE, DIGITAL REVERB, MIC REVERB
BRILLIANCE	MELLOW, BRIGHT (5 STEPS)
TOUCH SENSITIVITY	LIGHT, NORMAL, HEAVY
TRANSPOSE	G–C–F#
METRONOME	BEAT: OFF, 2/2, 2/4, 3/4, 3/4, 4/4, 5/4, 6/4, 7/4, 3/8, 6/8,9/8, 12/8, TEMPO
SEQUENCER	TRACK:1–4, RHYTHM STORAGE CAPACITY: APPROX. 20000 NOTES, RECORDING MODE: REAL TIME COUNT IN, SEQUENCER VOLUME, RESET, STOP, PLAY,RECORD, BWD, FWD MENUS: SONG NAMING, TEMPO WRITE, PANEL WRITE, PART SETTING, FIXED TEMPO, SONG CLEAR, TRACK CLEAR
DISK DRIVE	3.5inch FLOPPY DISK DRIVE for 2HD (1.44MB), 2DD (720kB) SONG SELECT MENUS: SONG SAVE, SONG DELETE, DISK FORMAT
CONTROL	INITIALIZE, MASTER TUNING, KEY SCALING, PIANO TUNING, MINIMUM RANGE, REVERB CONTROL

•Specifications are subject to change without notice for further improvement.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics

© 1999 Matsushita Electric Industrial CO. , LTD. All rights reserved. Unauthorized copying and distribution is a violation of law.

MIDI	BASIC CHANNEL, LOCAL CONTROL, TRANSPOSE OUT, PROGRAM CHANGE, PEDAL ON/OFF, EFFECT ON/OFF, PROGRAM CHANGE OUT
DISPLAY	LCD (16 CHARACTER × 2 LINES)
DEMO	○
TERMINALS	LINE OUT (R/R+L, L), AUX IN (R/R+L, L), MIDI (IN, OUT), COMPUTER, PEDAL IN, PHONES× 2, MIC
OUTPUT	200W (100W × 2)
SPEAKERS	16 cm × 2, 6.5 cm × 2
POWER REQUIREMENT	180 W AC 120/220/240 V 50/60 Hz AC 120V · 60 Hz (NORTH AMERICA AND MEXICO) AC 230-240V 50/60 Hz (EUROPE, AUSTRALIA, NEW ZEALAND, SINGAPORE AND PHILIPPINES)
DIMENSIONS (W×H×D)	138.7 cm × 107.9 cm × 52 cm (54-19/32" × 42-15/32" × 20-15/32")
NET WEIGHT	61.1 kg (134.7 lbs.)
ACCESSORIES	AC CORD

WARNING

To prevent the risk of fire, smoke, or electrical shock and to ensure safe operation, please be sure to follow the safety guidelines below.

1. At places where special caution is required, the necessary safety precautions are clearly labeled or printed, for example, on the cabinet, or on the part concerned. Please follow these safety precautions, and also those listed in the Owner's Manual.

2. Parts which have a ⚠ mark in the circuit diagram or in the parts list are essential for safety. When replacing these parts, be sure to use only the specified parts.

3. Use the specified types for internal wiring (double-insulated wiring, etc.).

4. When replacing parts on the AC primary side (power transformer, electric switch, electrical cord, noise-prevention condenser, etc.), wind the lead wire and secure it by soldering.

5. Do not let the wiring come into contact with heat-emitting devices (fuse resistor, radiator plate, etc.).

6. When replacing the wiring, make sure that it is not in contact with the unfinished or rough edge of a part.

7. When replacing the power cord (except for the plug-in type), tug it from various directions to confirm that it does not slip out of place.

8. Spacing
   If soldering was done on the AC primary circuit, confirm that the interval between the soldered terminals or between the terminal and surrounding metallic parts is at least the minimum required (between the primary circuit and the chassis: at least 6.5 mm; between primary circuit terminals: at least 4.0 mm; between primary circuit terminals and secondary circuit terminals: at least 6.5 mm).

CONTENTS

■ **INTRODUCTION**

SAFETY PRECAUTION I-2
ARRANGEMENT OF CONTROL PANEL I-3
HOW TO ASSEMBLE THE PIANO I-5
KEYBOARD RANGES I-6
INITIAL SETTING I-6
TERMINALS I-7
PARTS LOCATION I-8
MEASUREMENTS AND ADJUSTMENT I-8
DISASSEMBLY INSTRUCTIONS I-9
SYMPTOMS WHICH APPEAR
TO BE SIGNS OF TROUBLE I-12
ERROR MESSAGES I-14
ABOUT THE SELF-DIAGNOSTIC FUNCTION I-15
MIDI IMPLEMENTATION CHART I-18
PRECAUTIONS BEFORE SERVICING I-19

■ **SCHEMATIC DIAGRAMS**

WIRING CONNECTION Diagram II-1
BLOCK Diagram II-2
Measuring Condition of MAIN P.C.B. II-5
MAIN P.C.B. II-6
MAIN CIRCUIT II-8
FJASP/HPM CIRCUIT II-15
FJASP P.C.B. II-18
Measuring Condition of FJASP P.C.B. II-19
ASUB CIRCUIT II-20
ASUB/HPM P.C.B. II-20
CPL/CPR CIRCUIT II-21
CPL/CPR P.C.B. II-24
COM/PKB P.C.B. II-25
COM/PKB CIRCUIT II-25
MKB1/MKB2 P.C.B. II-26
MKB1 CIRCUIT II-27
MKB2 CIRCUIT II-28

■ **REPLACEMENT PARTS LIST**

P.C.B. AND WIRING PARTS LIST III-1
CABINET PARTS LOCATION III-8
MANUAL KEYBOARD PARTS LOCATION III-13
PACKING III-14

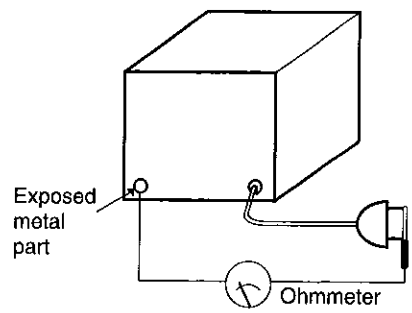
SAFETY PRECAUTION

● Safety Precaution

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only the manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

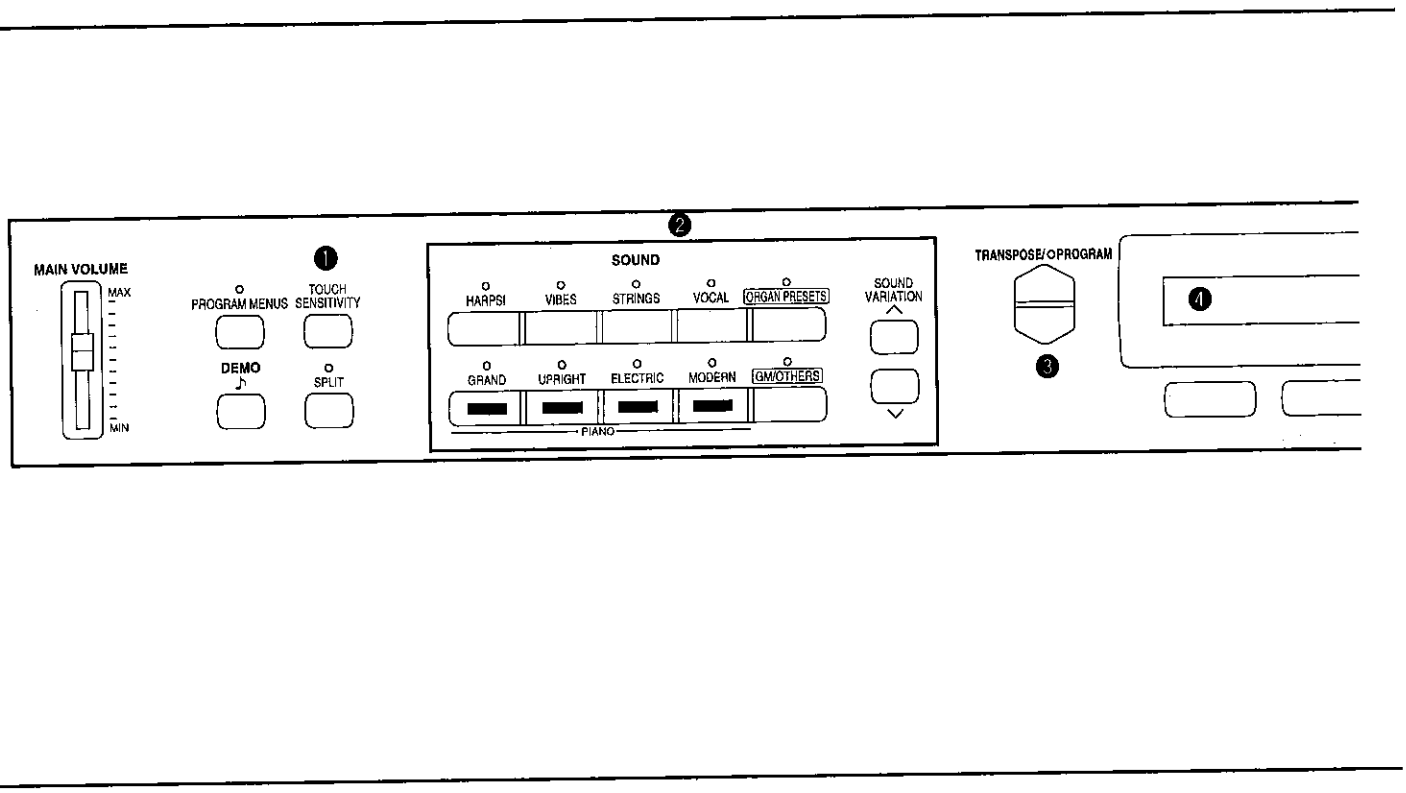
● Insulation Resistance Test

1. Unplug the power cord and short the prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screw heads, connectors, control shafts, handle brackets, etc. Measurements should range from 4 MΩ to infinity for all exposed parts.



Resistance = 4MΩ to ∞

ARRANGEMENT OF CONTROL PANEL



❶ TOUCH SENSITIVITY
The keyboard touch (TOUCH SENSITIVITY) can be charged to match your type of playing.

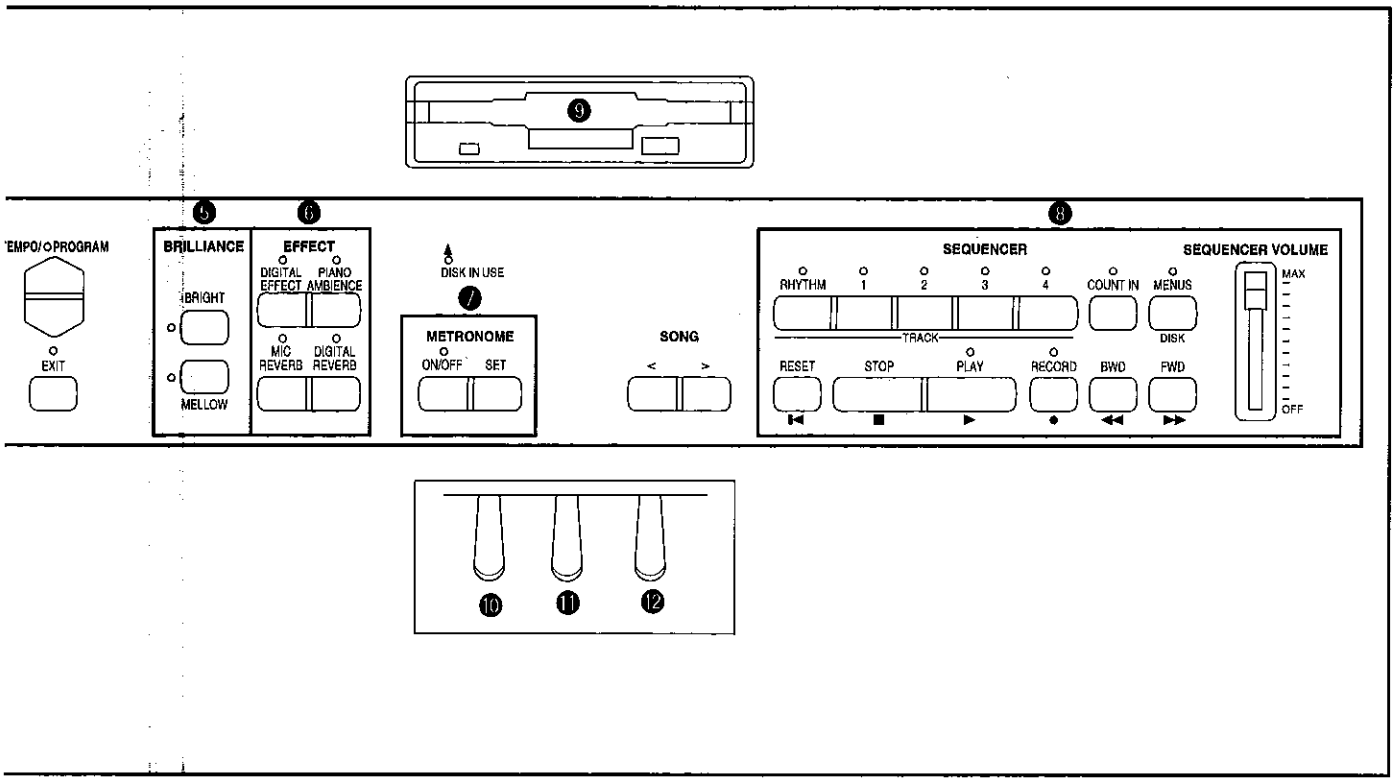
❷ SOUND
Press one of the **SOUND** buttons, and then use the **SOUND VARIATION** buttons to select the desired sound. Each sound features Touch Response, which increases the volume when the keyboard is played harder.

❸ TRANSPOSE
Raise or lower the key of the entire keyboard.

❹ Display
Display performance information, function settings and other messages.

❺ BRILLIANCE
The **BRILLIANCE** allows you to select the brightness of the sound from 5 settings

❻ EFFECT
Add various effects to the sounds.



❼ METRONOME
Perfect your playing by practicing in time with the metronome.

❽ SEQUENCER
Record your performance and have it automatically played back.

❾ DISK DRIVE
You can store your recorded songs on a floppy disk, as well as play back commercial song disks.

❿ Soft pedal
When the pedal is depressed, the sound is softer.

⓫ Sostenuto Pedal
If the pedal is pressed while the keys are pressed, a sustain effect is applied to those notes only.

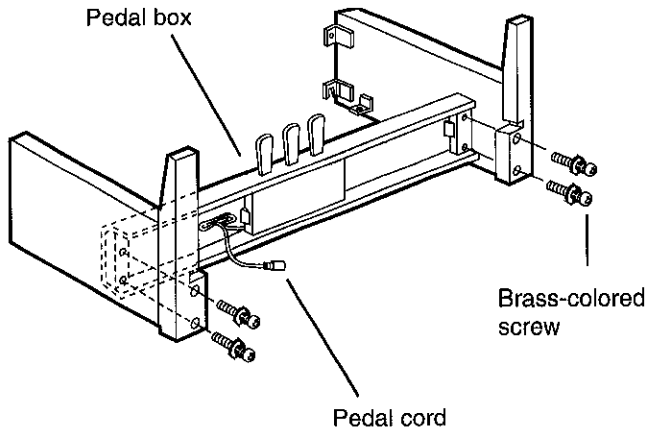
⓬ Sustain Pedal
When a key is released while this pedal is depressed the sound is sustained so that it lingers and slowly fades out.

HOW TO ASSEMBLE THE PIANO

To prevent the piano unit from falling off the stand, secure it firmly with the screws.

1 Assemble the right and left planks to the pedal box with the 4 brass-colored screws.

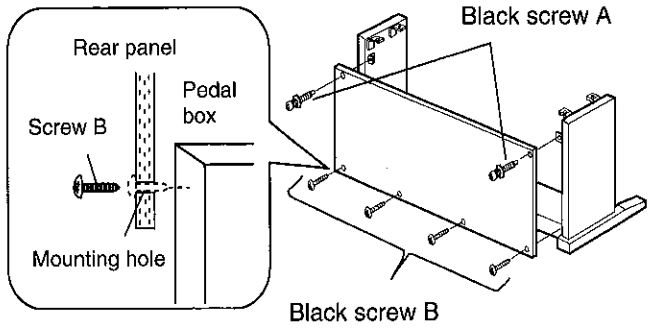
- Loosen the pedal cord, stowed on the inner side of the pedal box, and extend it.



[Fig. 1]

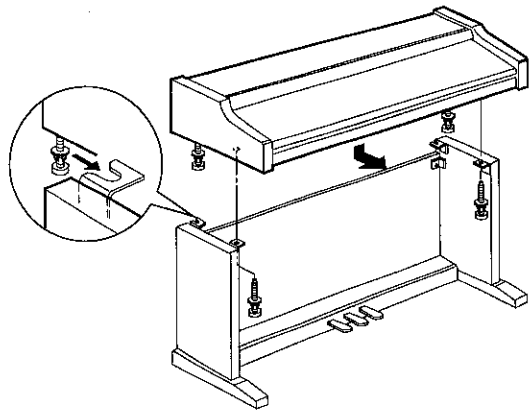
2 Place the stand upright and mount the rear panel with 2 black screws A and 4 black screws B.

- Run the screws directly into the pedal box as there are no rough holes in the pedal box.



[Fig. 2]

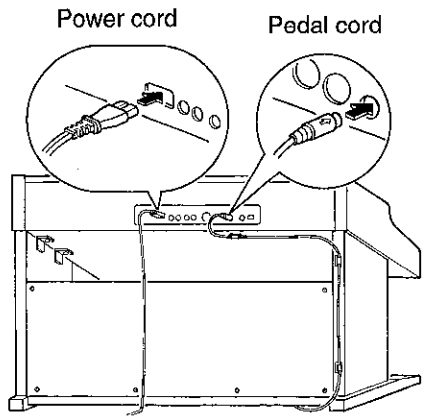
3 Place the piano body on the stand and secure it with 4 black screws A.



[Fig. 3]

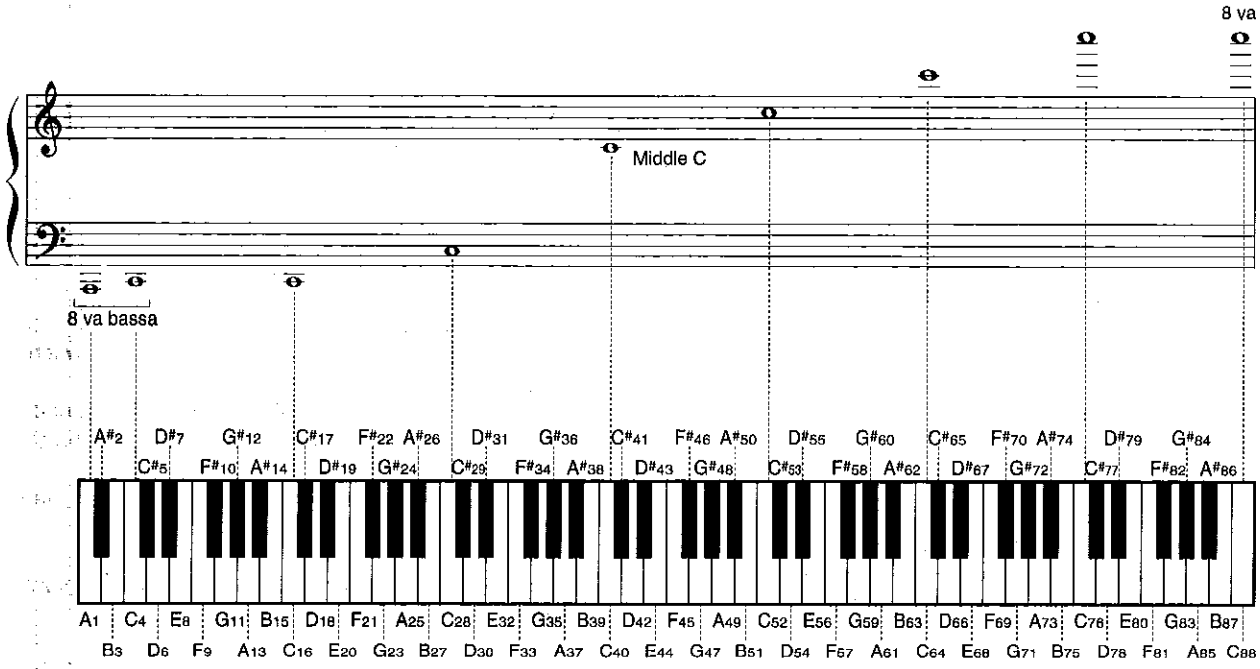
4 Connect the pedal cord and power cord to the terminals located on the rear of the piano unit as shown below.

- Secure the pedal cord to the clamps as shown in the figure.



[Fig. 4]

KEYBOARD RANGES



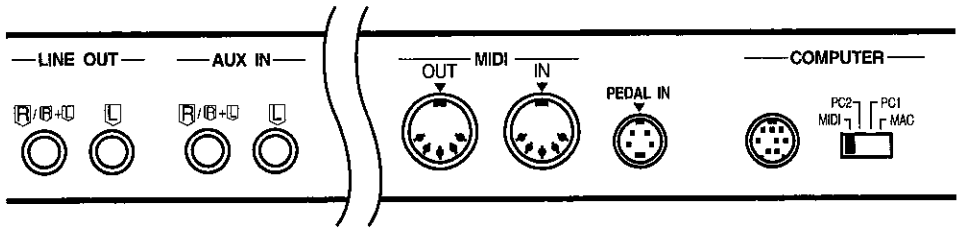
INITIAL SETTING

The following procedure resets all programmable settings, functions and memories to their initialized (factory-preset) status. Use this procedure if the buttons, keys, etc. malfunction, or when you wish to reset the memories and functions.

1. Turn off the **POWER** button.
2. While pressing the keyboard labeled **INITIAL** at the same time, turn the **POWER** button on again.

TERMINALS

(on the rear panel)



LINE OUT (output level 1.5 Vrms, 600 Ω)
By plugging into an external high-power amplifier, the sound can be reproduced at a high volume. (Use the **R/R+L** terminal when outputting monaural sound. However, there are some cases where the sound quality may deteriorate depending on the sound.)

AUX IN (input level 0.5 Vrms, 6 kΩ)
Other instruments such as a rhythm machine can be connected to the piano so that the sound is output from this instrument's speakers. To receive monaural sound, connect the other instruments to the **R/R+L** terminal.

MIDI (Musical Instrument Digital Interface)
MIDI is the standard specification that enables connection to equipments such as synthesizers and personal computers.

IN : The terminal that receives data from external equipment.
OUT : The terminal that transmits data from this instrument to external equipment.
- Use a 5-pin DIN cord (less than 15 m long) for these connections.

PEDAL IN
Connect the included pedal.

COMPUTER
By connecting this terminal to the serial port of a computer, performance data can be exchanged. Use the switch to select the type of computer.
- Be sure that the power to this instrument is turned off when connecting to a computer or when changing the switch setting.
- The new switch setting will be effective when the power is turned on again.

Caution: Failure to turn off the power before changing the switch setting may result in malfunction.

- When no computer is connected, or when a MIDI interface is used, the switch should be set to **MIDI**.

<Connection to a Macintosh series computer>
Use an ACCESSORY CABLE (SZ-JJAP1) to connect the **COMPUTER** terminal of this instrument to the modem port or printer port of a Macintosh Series computer. Set the switch to **MAC**.
- Set the MIDI interface clock of the Macintosh software to 1 MHz.

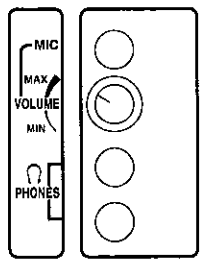
<Connection to a PC>
Use an ACCESSORY CABLE (SZ-JJAT1) to connect the **COMPUTER** terminal of this instrument to the RS232C terminal of a PC. Set the switch to **PC2**.
- The MIDI driver included with the cable should be installed in the computer. (Refer to the manual accompanying the cable.)

*Macintosh is a registered mark of Apple Computer, Inc.

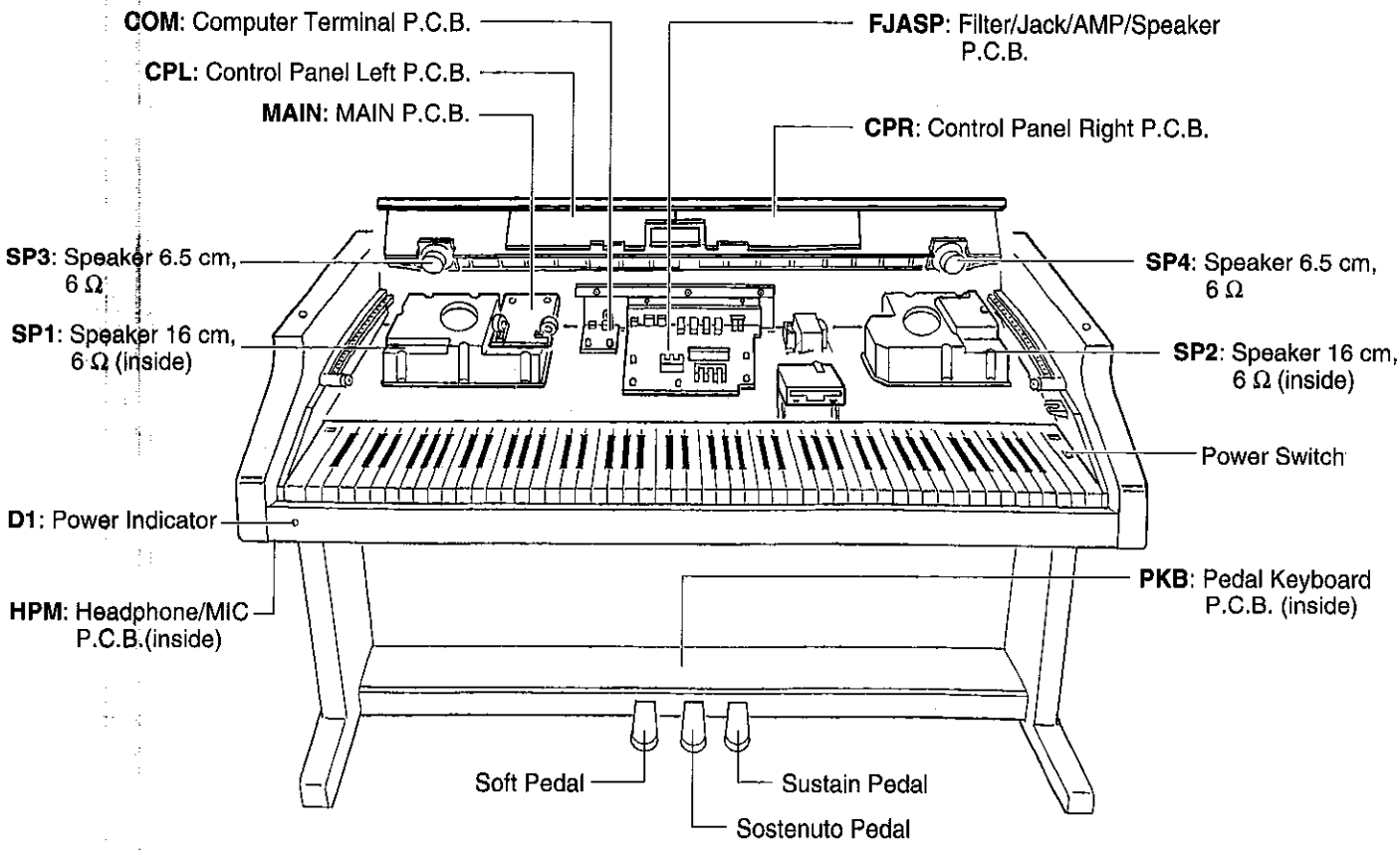
HEADPHONES (PHONES) ×2
For silent practice, headphones may be used. When plugged in, the speaker system is automatically switched off, and sound is heard only through the headphones.

MIC
A microphone can be connected to this instrument and the sound output through the speakers. Use the **VOLUME** control to adjust the volume. Reverb can be applied to the microphone input.

(beneath the left end of the keyboard)

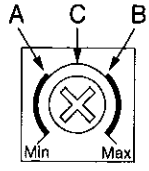


PARTS LOCATION


COM: Computer Terminal P.C.B.
CPL: Control Panel Left P.C.B.
MAIN: MAIN P.C.B.
FJASP: Filter/Jack/AMP/Speaker P.C.B.
CPR: Control Panel Right P.C.B.
SP3: Speaker 6.5 cm, 6 Ω
SP1: Speaker 16 cm, 6 Ω (inside)
SP4: Speaker 6.5 cm, 6 Ω
SP2: Speaker 16 cm, 6 Ω (inside)
Power Switch
D1: Power Indicator
HPM: Headphone/MIC P.C.B.(inside)
PKB: Pedal Keyboard P.C.B. (inside)
Soft Pedal
Sustain Pedal
Sostenuto Pedal

[Fig.5]

MEASUREMENTS AND ADJUSTMENTS

Adjustment	Equipment	Measuring conditions	Adjustment point
Switching AMP.	Adjustment screwdriver not made from metal	**MAIN VOLUME** is maximum.	VR1 on **FJASP** P.C.B.
	1. Turn VR1 until the end of the left. (Sounding the noise as a whistle.) 2. Turn VR1 to the right slowly with hearing as a while from the monitor speaker, there is the point where the noise stops suddenly. (Point A) 3. Turn VR1 further to the right, sounding the whistle noise again. (Point B) 4. Set VR1 the center of between the Point A and B.		

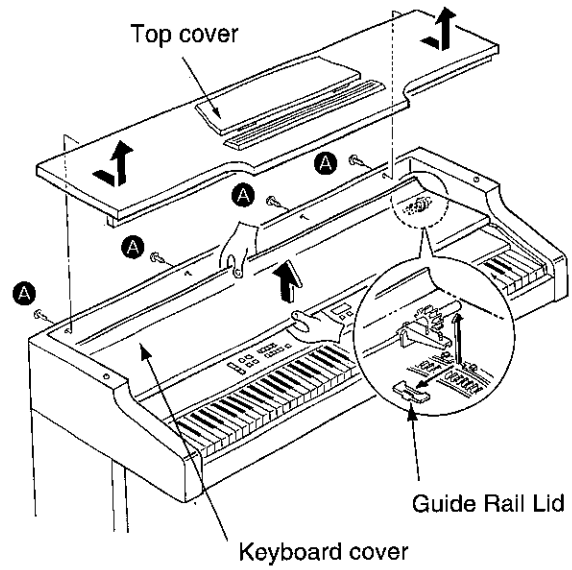
DISASSEMBLY INSTRUCTIONS

1 Removing the top cover

1. Remove the top cover mounting screws (Ⓐ 4 pcs.).
2. Slide the top cover forward and lift up (as shown by the arrows).

2 Removing the keyboard cover

1. Remove the top cover (see step 1).
2. Remove the guide ril lids from the guide rails.
3. Match the gears of the keyboard cover with the notches in the guide rail, and lift up the keyboard cover.

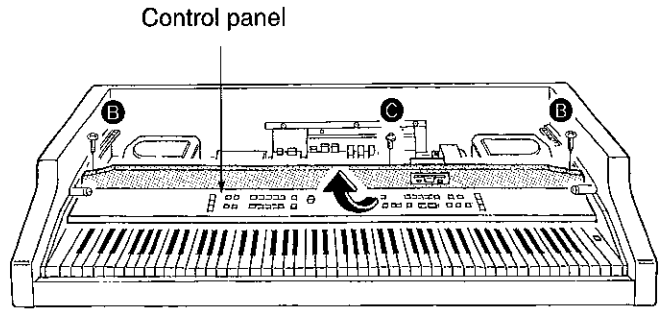


[Fig.6]

3 Removing the control panel

- Pull out the connectors on the control panel.

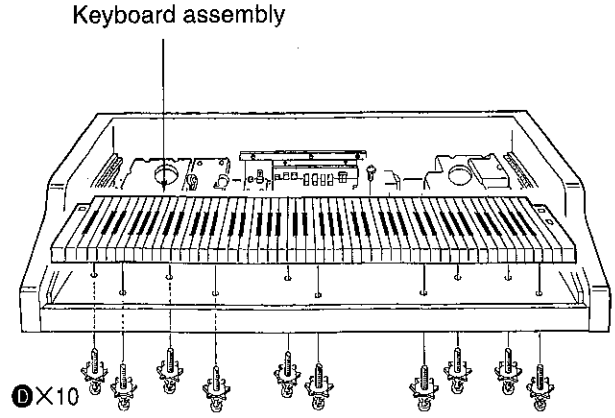
1. Remove the keyboard cover (see step 2).
2. Remove the control panel mounting screws (Ⓑ 2 pcs and Ⓒ 1 pc.).
3. Slide the control panel forward and pull out (as shown by the arrows).



[Fig.7]

4 Removing the keyboard assembly

1. Remove the control panel (see step 3).
2. Remove the keyboard assembly mounting screws located on the bottom of the cabinet (Ⓓ 10 pcs.).



[Fig.8]

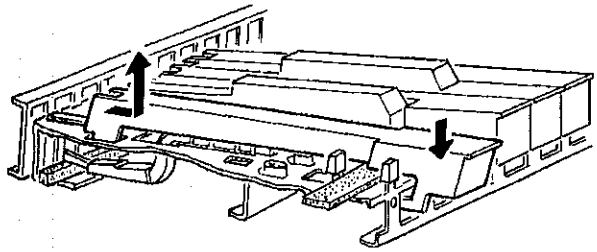
5 Key (s)

Disassembly

1. Remove the keyboard assembly (see step 4).
2. While pressing slightly the front of the key, push the rear of the key forward to disengage the key clow from the chassis.
3. Lift the key up to remove it.

NOTE:

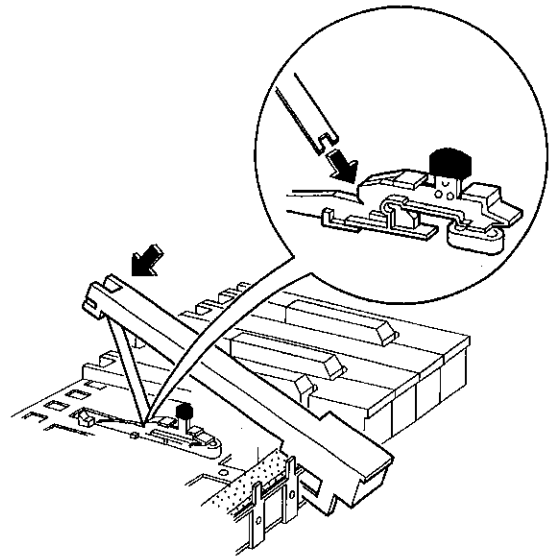
- The key claw is easily broken. Do not apply undue force. Should a key claw break, it can still be used.
- If a black key is to be replaced, it is necessary to remove both adjacent white keys.



[Fig.9]

Assembly

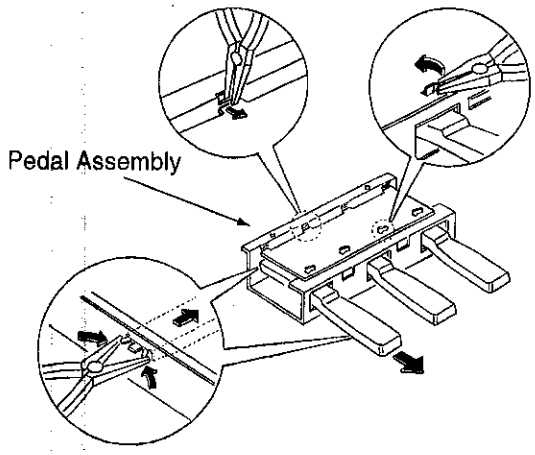
1. Insert the front part of the key into the chassis.
2. Insert the plate spring into the hammer notch as shown in the figure.
3. While slowly lowering the key into the chassis, insert the plate spring into the notch at the rear of the key.
4. Carefully insert the key into the opening in the chassis and slide the key towards the rear to lock it in place.



[Fig.10]

6 Disassembly of the pedal assembly

1. Remove the pedal assembly from the pedal box.
2. Disassemble the pedal assembly as shown in the figure.



[Fig.11]

7 Removing the speakers.

Remove the top cover (see step 1).

Removing the speaker box

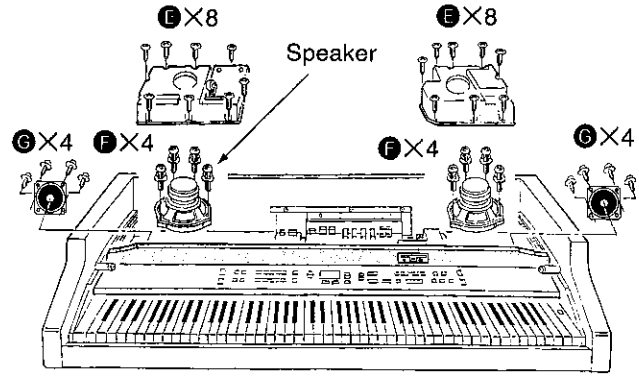
Remove the speaker box mounting screws (E 8 pcs. each).

Removing the speakers (16 cm)

Remove the speakers mounting screws (F 4 pcs. each).

Removing the speakers (6.5 cm)

Remove the speakers mounting screws (G 4 pcs. each).



[Fig.12]

8 Removing the printed circuit boards

- Remove the top cover (see step 1).
- Pull out the connectors on the printed circuit boards.

MAIN P.C.B.

1. Remove the MAIN P.C.B. mounting screw (H 4 pcs.).

FJASP P.C.B.

1. Remove the FJASP P.C.B. mounting screws (I 2 pcs.).
2. Release the claws of the 5 P.C.B. holders.

COM P.C.B.

1. Remove the COM P.C.B. mounting screws (J 1 pc.).
2. Release the claws of the 2 P.C.B. holders.

HPM P.C.B.

1. Remove the keyboard assembly (see step 4).
2. Remove the headphone jack mounting nuts (K 4 pcs.).
3. Remove the ground wire holding screw (L 1 pc.).
4. Remove the HPM P.C.B. mounting screws (M 2 pcs.).

Disk Drive unit

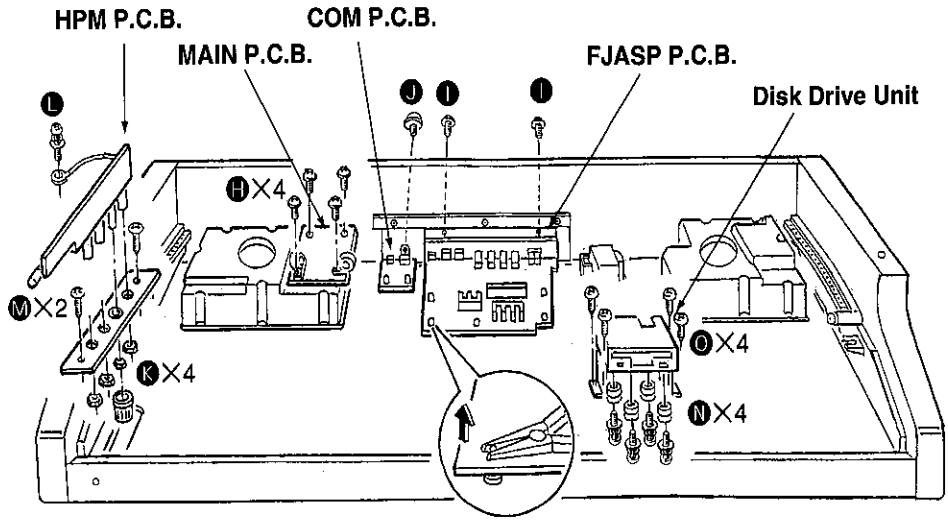
1. Remove the bracket mouting screws (N 4 pcs.).
2. Remove the disk drive unit mouting screws (O 4 pcs.).

CPL P.C.B.

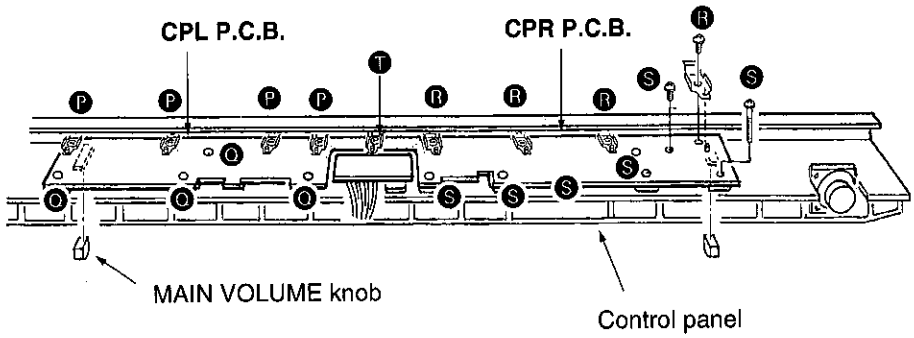
1. Remove the control panel (see step 3).
2. Pull of the MAIN VOLUME knob.
3. Remove the CPL P.C.B. mounting screws (P 4 pcs., Q 4 pcs. and T 1 pc.).

CPR P.C.B.

1. Remove the control panel (see step 3).
2. Remove the CPR P.C.B. mounting screws (R 4 pcs., S 6 pcs. and T 1 pc.).



[Fig.13]



[Fig.14]

SYMPTOMS WHICH APPEAR TO BE SIGNS OF THE TROUBLE

The following changes in performance may occur in the Technics Digital Ensemble but do not indicate trouble.

	Phenomenon	Remedy
Sounds and effects	The buttons, keys, etc. malfunction.	• Turn off the **POWER** button once, then turn it on again. If this procedure is not successful, turn off the **POWER** button once. Then, while pressing the **INITIAL** key, turn the **POWER** button on again. (Note that, in this case, all programmable settings, functions and memories return to their factory-preset status.)
	No sound is produced when the keys are pressed.	• The **MAIN VOLUME** is at the minimum setting. Adjust the volume with the **MAIN VOLUME** control. • The LOCAL CONTROL for a part performed on the keyboard is set to OFF. Set the LOCAL CONTROL to ON.
	Only percussive instrument sounds are produced when the keyboard is played.	• The DRUM KITS sounds in the **GM/OTHERS** button is selected.
	The volume is very low when the keyboard is played.	• The volume setting in the **SEQUENCER** contents is very low. Follow the INITIALIZE procedure to reset the settings.
	The sustain does not work even when the sustain pedal is depressed.	• The sustain pedal is not connected. Connect the pedal cord firmly to the **PEDAL IN** terminal on the back of the instrument.
SEQUENCER	Storage is not possible.	• The remaining memory capacity of the **SEQUENCER** is 0. Follow the SONG CLEAR or TRACK CLEAR procedure to erase the memory.
Disk Drive	The Disk Drive produces a noise during recording or playback.	• This occurs when the Disk Drive is reading a disk. It does not indicate a problem.
	When the procedure to play back a song from the disk is performed, the contents of the instrument's memory are erased.	• When performing the operation to play back a song from a disk, this instrument's memory memory is overwriten by the data from the disk. If you wish to preserve a song which is stored in this instrument's memory, save it to a disk before performing the disk playback procedure.

	Phenomenon	Remedy
MIDI	Data cannot be exchanged through MIDI terminals.	• The switch for the **COMPUTER** terminal is not set to **MIDI**. Turn off the power to this instrument and set the switch to **MIDI**. • Match the channels on the transmitting side and the receiving side.
	The sound quavers or is distorted.	• When the **COMPUTER** terminal or both the **MIDI IN** and **OUT** terminals are connected to a computer, depending on the computer software the received data may be sent back to the instrument just as it is. Because of this the sound generated from the keys and the sound generated from the returned data are both produced, causing undesirable effects, such as the sounds canceling each other out, for example. In this case, either change the software settings to prevent received data from being returned, or set the MIDI LOCAL CONTROL to off.
Other	Noise from a radio or TV can be heard.	• This sometimes occurs when electrical equipment such as a radio or TV is used near the instrument. Try moving such electrical equipment further away from the instrument. • The sound may be coming from a nearby broadcast station or amateur radio station. If the sound is bothersome, consult your dealer or service center.
	The cabinet becomes warm during use.	• This instrument has a built-in power source that heats the cabinet to some degree. This is not an indication of trouble.

About the backup memory
This instrument's recorded song data is retained for about 80 minutes, and all the instrument settings for about one week, after the power is turned off. To save your recorded song data, please store it on a floppy disk before turning off the power.

ERROR MESSSAGES

No.	Contents
00: WRONG DISK!	The data on the disk that you are using is for a different product.
01: LOAD ERROR! TRY AGAIN!	An error has occurred while the disk was loading. Please try again!
02: NO DISK	There is no disk in the Disk Drive.
03: FILE EMPTY!	The file that you tried to load is empty.
04: SAVE ERROR! TRY AGAIN!	An error has occurred while the disk was saving. Please try again!
05: WRITE PROTECTED!	The disk that you are using is write protected. Please remove the write protection and try again.
06: DISK FULL!	The disk that you are using is full. Please use another disk.
07: FORMAT ERROR	An error has occurred while the disk was formatting. The disk that you are using may be faulty. Please try formatting another disk.
08: COPY PROTECTED!	You attempted to save a song which is based on copyrighted song data. Such data cannot be saved.
09: NO SEQUENCER DATA!	The song you are trying to save is empty.
10: UNFORMAT DISK	The disk you are using has not been formatted. Format the disk before using it.
11: SEQUENCER DATA ERROR!	An error occurred during playback. Playback is not possible.
12: MEMORY FULL!	• The recording memory is full. Further recording is not possible. • The data is too large; playback to the end is not possible.
13: ONLY FOR PLAY	This song data is for playback only. Recording or saving to a disk is not possible.
14: DRUM KIT ONLY FOR RHYTHM TR	DRUM KIT sounds (**GM/OTHERS**) can be recorded only in the **RHYTHM** track. It is not possible to record these sounds in other tracks.
15: DISK ERROR	This is a read-only file; it cannot be saved or deleted.

ABOUT THE SELF-DIAGNOSTIC FUNCTION

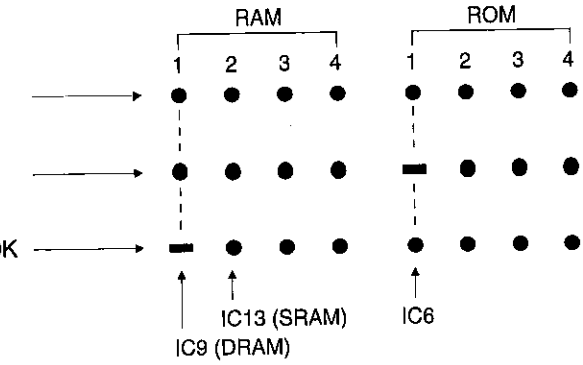
This model has some self-diagnostic capabilities. When set to the self-diagnostic mode, operation of various components can be verified by following the procedures in the chart below.

No.	PCB	TEST MODE	Procedure
1	MAIN	RAM (IC8, 9), ROM (IC6) check	1. Connect the CHECKING DEVICE (refer to page I-17) to CN4 on the MAIN P.C.B., and turn on the CHECKING DEVICE switch. 2. Turn on the power switch.

When the power switch is turned on, the LED of the CHECKING DEVICE flashes 8 times. The first 4 flashes are for the RAM (DRAM, SRAM) check, and the later 4 flashes are for the ROM check. The order of the LED flashes correspond to the respective IC numbers as shown below. If an IC is defective, the corresponding flash time is longer.

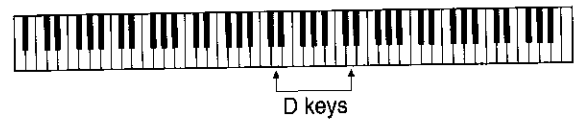
Examples

1. RAM OK, ROM OK
2. RAM OK, ROM (IC6) defective
3. RAM (IC9) defective, RAM (IC3), ROM OK



NOTE : ● indicates short flash time
▬ indicates long flash time

2	CPL	CPU (IC1) check	Press and hold the two D keys shown below, and then turn on the power switch.



When the power switch is turned on, the status of the CONTROL PANEL CPU (IC1) is displayed on the LCD as shown below.

LCD Display

1. IC1 OK → CP CPU CHECK OK
2. IC1 defective → CP CPU CHECK NG

No.	PCB	TEST MODE	Procedure
3	MAIN	Wave ROM/LSI check MAIN: IC12, IC18 <LCD display> SINE WAVE CHECK	1. Press and hold the two E keys shown below, and then turn on the power switch. 2. Reduce the MAIN VOLUME level low enough. 3. Use the **SOUND** buttons to check the corresponding operations (see table below). E keys

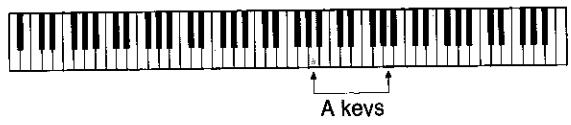
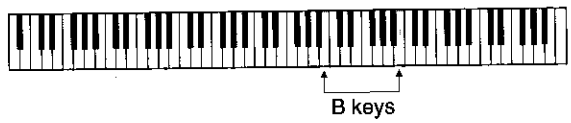
BUTTON	LCD Display	FUNCTION
GRAND	FULL w/o TOUCH	Full amplitude sound output without TOUCH
UPRIGHT	OUTSEL CHECK	Check output channel: C key—ok; other key—ok
ELECTRIC	+2 OCT. w/o TCH	Full amplitude sound output without TOUCH at +2 octaves
MODERN	–2 OCT. w/o TCH	Full amplitude sound output without TOUCH at –2 octaves
GM/OTHERS	NORMAL w/ TOUCH	Sound output with TOUCH (each key)
HARPSI	–16 db w/o TOUCH	Full amplitude sound output without TOUCH at –16 dB

Sound generator ROM particulars

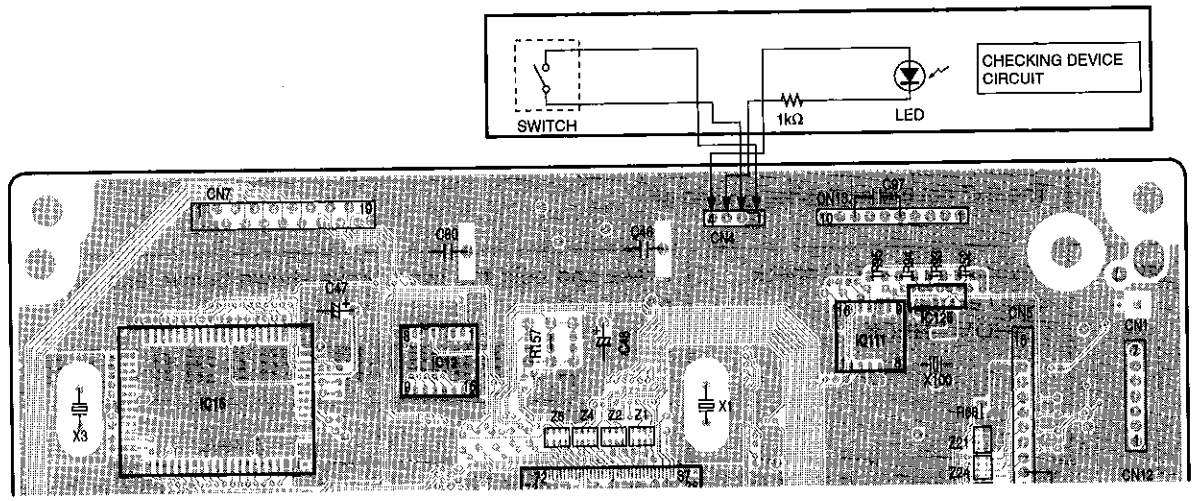
Starting with the C key, bank numbers correspond to the keys in order, from lower to the higher number. If pressing a key produces no sound or distored sound, the corresponding sound generator ROM is defective.

BANK	WAVE ROM	check key note
BANK 0	IC104, 105	C
1	IC106, 107	C#
2	IC2, 5	D to B

4	CPL CPR	Control Panel buttons LED lighting check <LCD display> CP SW&LED CHECK	Press and hold the two F keys shown below, and then turn on the power switch. F keys
		Press the buttons on the control panel and confirm that the corresponding LEDs light. •To light up all of the LEDs on the Control Panel, press **DEMO** button.	
5		LCD test <LCD display> LCD MODULE CHECK	Press and hold the two G keys shown below, and then turn on the power switch. G keys
		The 5x7 dot matrix flashes on and off.	
6	MKB	Keyboard ROM (IC1) check <LCD display> EE-ROM CHECK	Press and hold the two C keys shown below, and then turn on the power switch. A keys
		When the keyboard ROM (IC1) is all right, "OK" is shown; if the compensation value is incorrect, then "DATA NG" is shown; if the hardware is defective, then "DEVICE NG" is shown.	

No.	PCB	TEST MODE	Procedure
7	MAIN	Peripheral devices check 1. FDC IC (IC15) test 2. DSP IC (IC109) test <LCD display> FDC & DSP CHECK	Press and hold the two A keys shown below, and then turn on the power switch. 
		1. The test results on the FDC IC will be displayed on the LCD. **NOTE:** This test only checks communications between the FDC IC and MAIN CPU. It does not test operation of the FDC IC itself, the route from the FDC IC to Floppy Disk Drive operation. To include the Floppy Disk Drive in testing, use the "Floppy Disk Drive SAVE/LOAD test" described below. 2. The correct sine wave sound will be produced if the DSP IC is working properly. **NOTE:** Set the **MAIN VOLUME** to an appropriate level. This test only checks the operation of the DSP IC itself. If the DSP IC operation is defective check the relative DRAM (IC108) also.	
8		Floppy Disk Drive: SAVE/LOAD test <LCD display> SAVE&LOAD	1. Insert the floppy disk formatted into the Disk Drive. 2. Turn on the power switch while holding down the two B keys shown below. 
		Press the left button below the LCD to begin the Floppy Disk Drive SAVE/LOAD test. The test is carried out repeatedly. Data is saved and loaded, and then the two data sets are compared. The number of times the test results "OK" or "NG" are counted and displayed on the LCD. To stop the test, press the same button. Even when the Floppy Disk Drive is functioning properly, the test can result "NG", If this happens frequently, clean the magnetic heads of the Floppy Disk Drive with a cleaning disk. Then, charge the disk used in testing with another disk and reperform the test. If the trouble is not solved, it is likely that the Disk Drive unit or some other part of the hardware is broken.	

■ Connection between serving CHECKING DEVICE and MAIN P.C.B.



MIDI IMPLEMENTATION CHART

Digital Piano [SX-PX336] [SX-PX336M]

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1–16	1–16	memorized
	Changed	1–16	1–16	
Mode	Default	3	3	memorized
	Messages	×	×	
	Altered	—	—	
Note Number		*21–108	0–127	
	True voice	—	*0–127	
Velocity	Note ON	○	○	
	Note OFF	× (9nH: V=0)	×	
After Touch	Key's	×	×	
	Ch's	×	×	
Pitch Bend		×	○	
Control Change	00, 32	×	○	bank select MSB, LSB
	01	×	**○	modulation
	06, 38	×	**○	data entry
	07	×	**○	volume (part)
	10	×	**○	pan
	11	×	**○	part expression
	64	○×	○×	sustain pedal
	66	○×	○×	sostenuto pedal
	67	○×	○×	soft pedal
	91	×	**○	reverb depth
	93	○×	○×	digital effect
	98, 99	×	**○	NRPN LSB, MSB
	100,101	×	**○	RPN LSB, MSB
Prog Change		○×	○×	
	True #	0–127	0–349	
System Exclusive		×	×	
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real Time	Clock	×	×	
	Commands	×	×	
Aux Messages	Local ON/OFF	×	○	
	All Notes OFF	×	○	
	Active Sense	○	○	
	Reset	×	×	
Notes		○× .....Whether or not the data for each of these items is transmitted or received can be set. * Changes depending on the **TRANSPOSE** setting. ** Effective only in the MULTI TIMBRE mode.		

Mode 1: OMNI ON, POLY **Mode 2:** OMNI ON, MONO ○ : Yes

Mode 3: OMNI OFF, POLY **Mode 4:** OMNI OFF, MONO × : No

PRECAUTIONS BEFORE SERVICING

■ Precautions for measuring of the output waveforms.

1. The waveform was measured with a "National Digital Storage Oscilloscope VP-5730A". Therefore the waveforms of musical tone signals shown may differ somewhat due to the difference in the timing of triggering.
2. Since the 1/10 test probe is used, the indicated voltage value on the bottom part of each waveform photo is 1/10 of the actual value (e.g. 0.2 V/cm should be 2.0 V/cm).
3. To measure the waveforms, first set this unit to the self-diagnostic mode (refer to page I-16, No. 3). The Wave ROM output will then be output as a sine wave to facilitate the servicing check.

■ Important safety notice:

Components identified by a ⚠ mark have special characteristics impotant for safety.
When replacing any of these components, use only manufacture's specified parts.

■ Symbolic Marks

The symbolic marks for resistors and capacitors which used in this circuits are classified as following TABLE-1 and TABLE-2.

1. RESISTORS
   - Resistors without symbolic mark are FIXED CARBON FILM RESISTORS (ERD-type).
   - All resistors are 1/4 WATT, ±5 % TOLERANCE unless otherwise designated in schematic diagrams.

(TABLE-1)

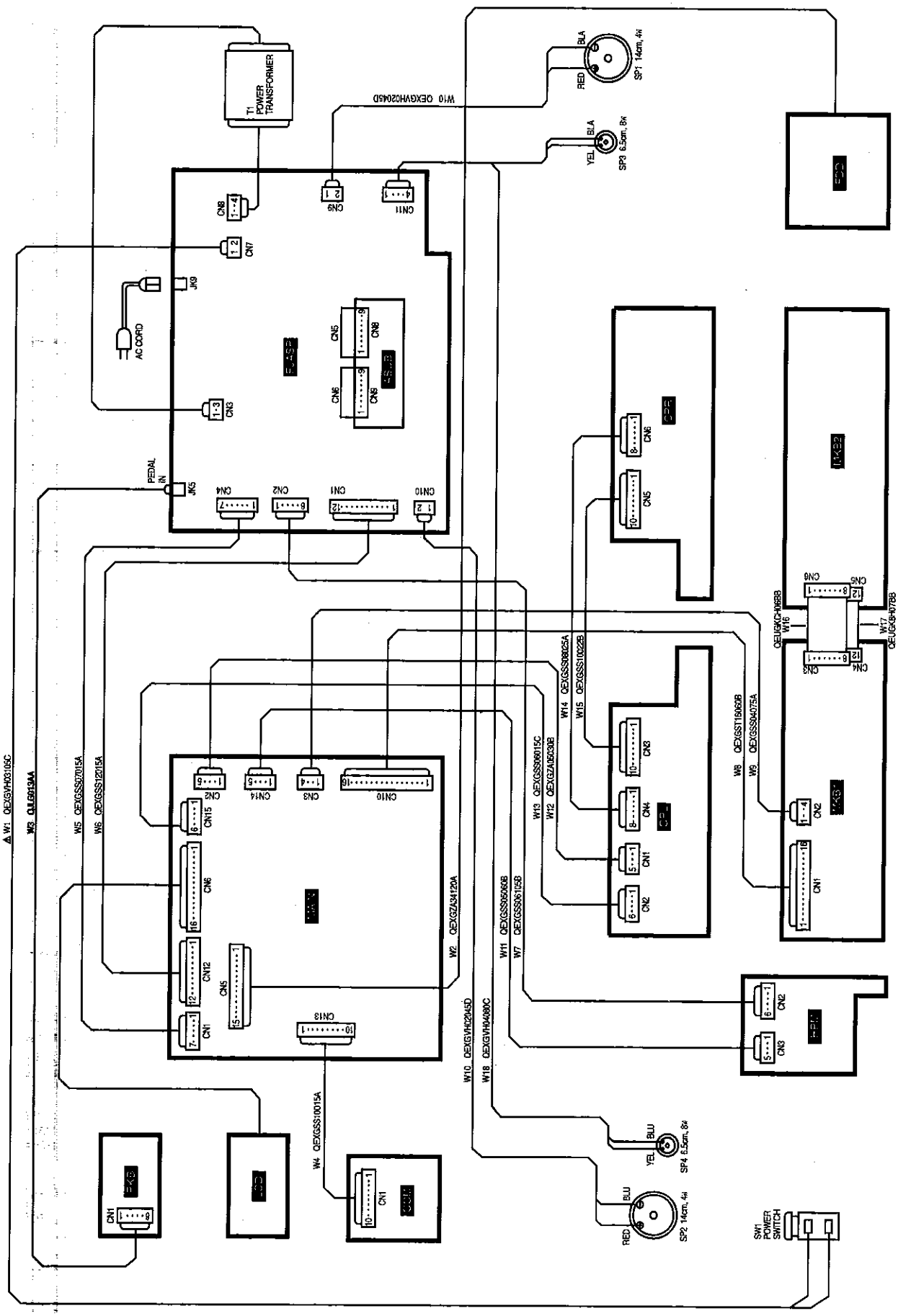
SYMBOL	SPECIFICATION	SYMBOL	SPECIFICATION
Ⓕ	Fixed Carbon Film Resistors "FLAME-PROOF" (ERD—F—type)	Ⓕ	Fixed Metal Film Resistors "FLAME-PROOF" (ERX—type)
Ⓕ	Fixed Wire Wound Resistors "FLAME-PROOF" (ERF—type)	[F]	Fuse Type Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERQ—type)
Ⓕ	Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERG—type)	[F]	Fuse Type Fixed Carbon File Resistors "FLAME-PROOF" (ERD2FC—type)
Ⓖ	Fixed Metal Film Resistors (Precision and High Stability) (ERO—type)		

2. CAPACITORS
   - Capacitors without symbolic mark are POLYESTER CAPACITORS. (ECQM-type, ECQG-type, ±10 % Tolerance)
   - Polarized capacitors without symbolic mark are Aluminum Electrolytic Capapcitors. (ECEA-type, ±20 % Tolerance)

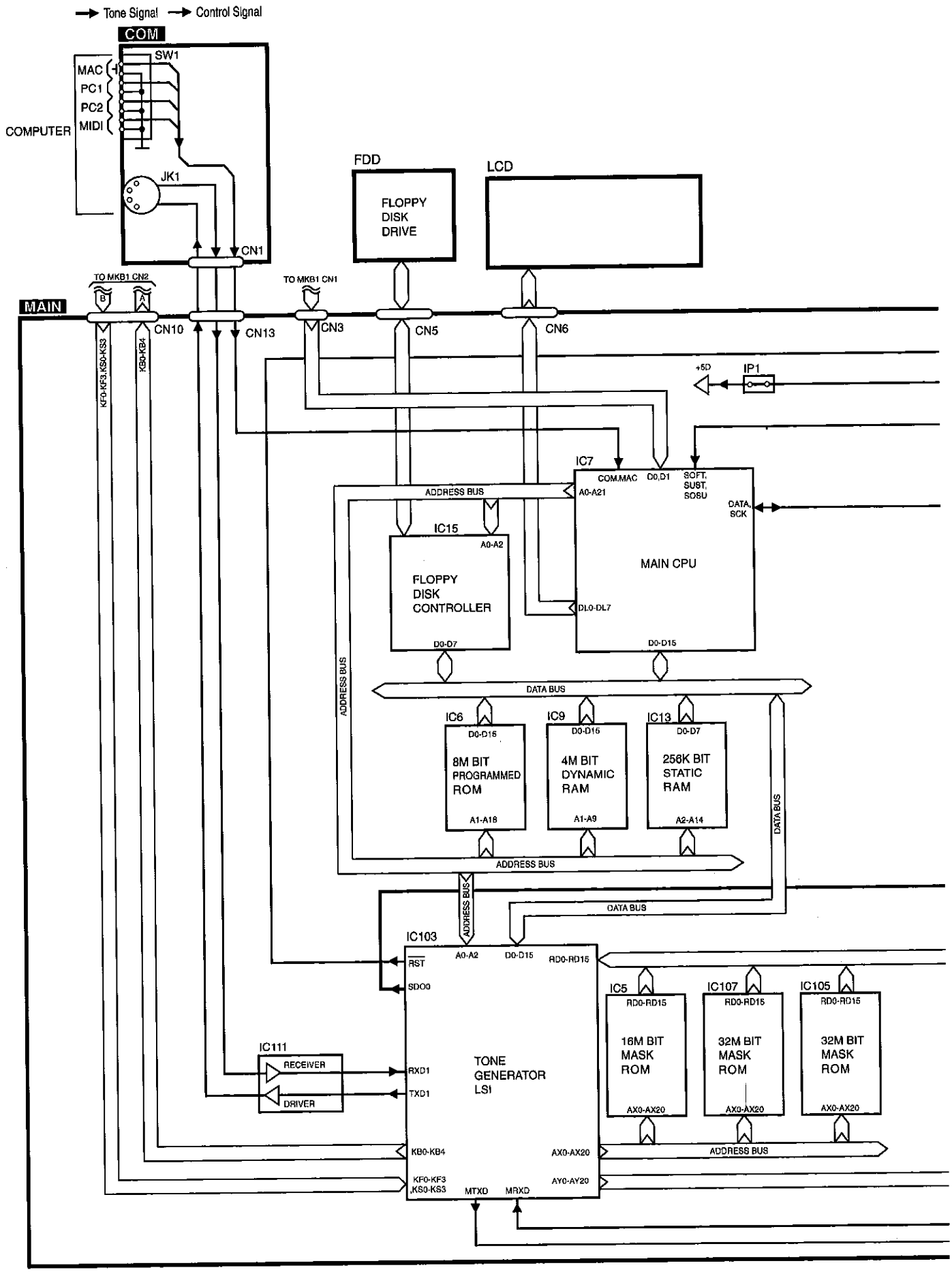
(TABLE-2)

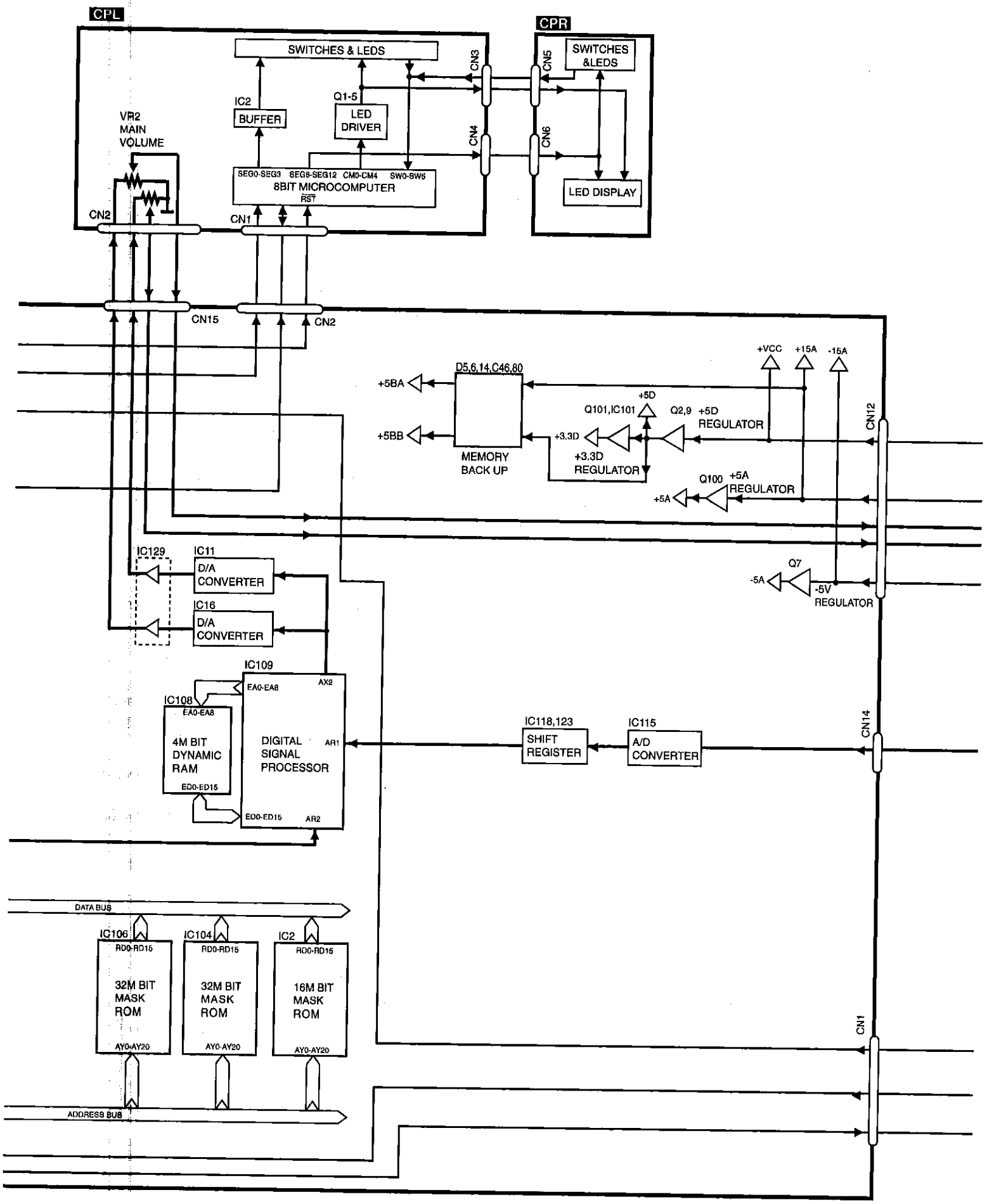
SYMBOL	SPECIFICATION	TYPE
Ⓝ	Non-Polarized Electrolytic Capacitors	ECEA_KN_type
Ⓨ	Non-Polarized Electrolytic (for Network system)	ECEA_Y_type
Ⓣ	Tantalum Solid Electrolytic Capacitors	ECS_type
ⓉⒻ	Metalized Plastic Film Capacitors (TF Series)	ECQV_type
○	Temperature Compensating Ceramic Capacitors	ECC_type
	High-Dielectric Constant Ceramic Capacitors	ECK_type ECR_type
	Axial Lead Ceramic Capacitors	ECB_type
	Metalized Polyester Film Capacitors for Across the Line	ECQ_EW_type
	Aluminum Electrolytic Capacitors for Smoothing Circuit	ECES_type
	Multilayer Ceramic Chip Capacitors	ECUV_type

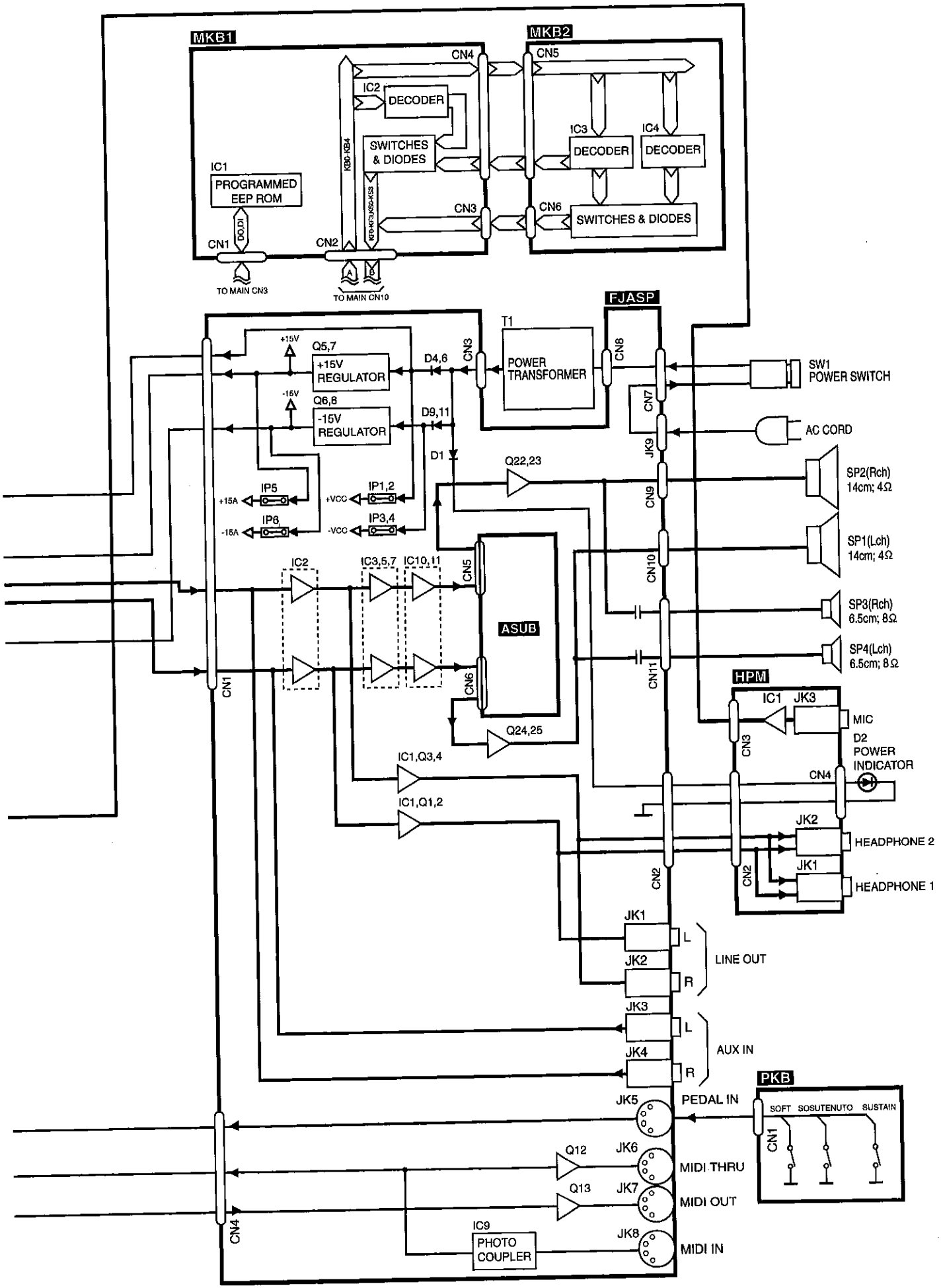
■WIRING CONNECTION Diagram



■BLOCK Diagram




CPL
CPR
SWITCHES & LEDS
SWITCHES &LEDS
CN3
CN5
CN4
CN6
IC2
BUFFER
Q1-5
LED DRIVER
VR2
MAIN VOLUME
SEG0-SEG3 SEG8-SEG12 CM0-CM4 SW0-SW5
8BIT MICROCOMPUTER
RST
LED DISPLAY
CN2
CN1
CN15
CN2
+VCC
+15A
-15A
D5,6,14,C46,80
+5BA
+5BB
MEMORY BACK UP
+5D
Q101,IC101
Q2,9 +5D REGULATOR
+3.3D
+3.3D REGULATOR
CN12
Q100 +5A REGULATOR
+5A
IC129
IC11
D/A CONVERTER
IC16
D/A CONVERTER
Q7
-5A
-5V REGULATOR
IC109
EA0-EA8
AX2
IC108
EA0-EA8
4M BIT DYNAMIC RAM
ED0-ED15
DIGITAL SIGNAL PROCESSOR
AR1
ED0-ED15
AR2
IC118,123
SHIFT REGISTER
IC115
A/D CONVERTER
CN14
DATA BUS
IC106
RD0-RD15
32M BIT MASK ROM
AY0-AY20
IC104
RD0-RD15
32M BIT MASK ROM
AY0-AY20
IC2
RD0-RD15
16M BIT MASK ROM
AY0-AY20
CN1
ADDRESS BUS


MKB1
MKB2
CN4
CN5
IC2
DECODER
SWITCHES & DIODES
IC3
DECODER
IC4
DECODER
IC1
PROGRAMMED EEP ROM
CN3
CN6
SWITCHES & DIODES
CN1
CN2
TO MAIN CN3
TO MAIN CN10
FJASP
T1
POWER TRANSFORMER
CN8
+15V
Q5,7
+15V REGULATOR
D4,6
CN3
-15V
Q6,8
-15V REGULATOR
D9,11
D1
SW1
POWER SWITCH
CN7
AC CORD
JK9
Q22,23
IP5
IP1,2
IP6
IP3,4
SP2(Rch)
14cm; 4Ω
CN9
SP1(Lch)
14cm; 4Ω
CN10
SP3(Rch)
6.5cm; 8Ω
SP4(Lch)
6.5cm; 8Ω
CN11
IC2
IC3,5,7
IC10,11
CN5
ASUB
CN6
CN1
Q24,25
HPM
IC1
JK3
MIC
D2
POWER INDICATOR
CN4
CN3
IC1,Q3,4
IC1,Q1,2
JK2
HEADPHONE 2
JK1
HEADPHONE 1
CN2
JK1
L
JK2
R
LINE OUT
JK3
L
JK4
R
AUX IN
PKB
JK5
PEDAL IN
SOFT SOSUTENUTO SUSTAIN
CN1
Q12
JK6
MIDI THRU
Q13
JK7
MIDI OUT
IC9
PHOTO COUPLER
JK8
MIDI IN
CN4

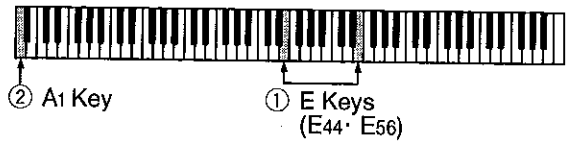
■Printed Circuit Board and Schematic Diagram

■ Measuring Condition of MAIN P.C.B.

Check Point ❸, ❹

Set to the self-diagnostic mode followings.

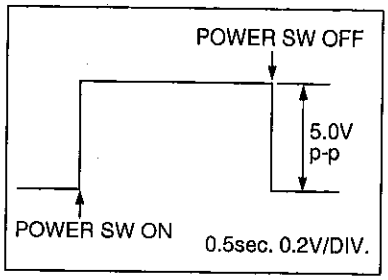
- While pressing two E keys (①) simultaneously, turn on the power switch.
- SOUND ..... GRAND
- Main Volume ..... MAX
- Keyboard ..... A_1 (②)



Check Point ❶

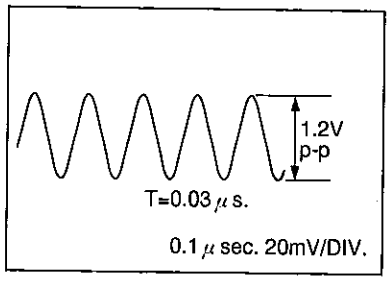
Set the initial setting mode (Refer to page I-6)

❶ $\overline{\text{RESET}}$

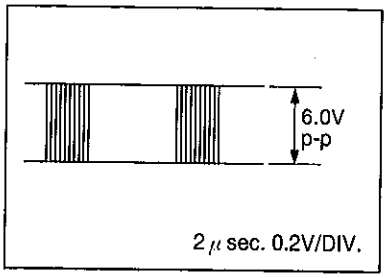


• Power SW ..... ON → OFF

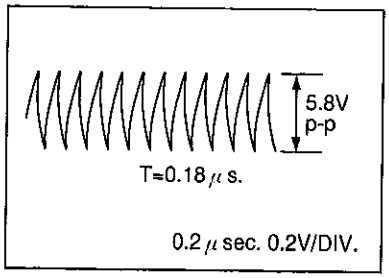
❷ TG CLOCK



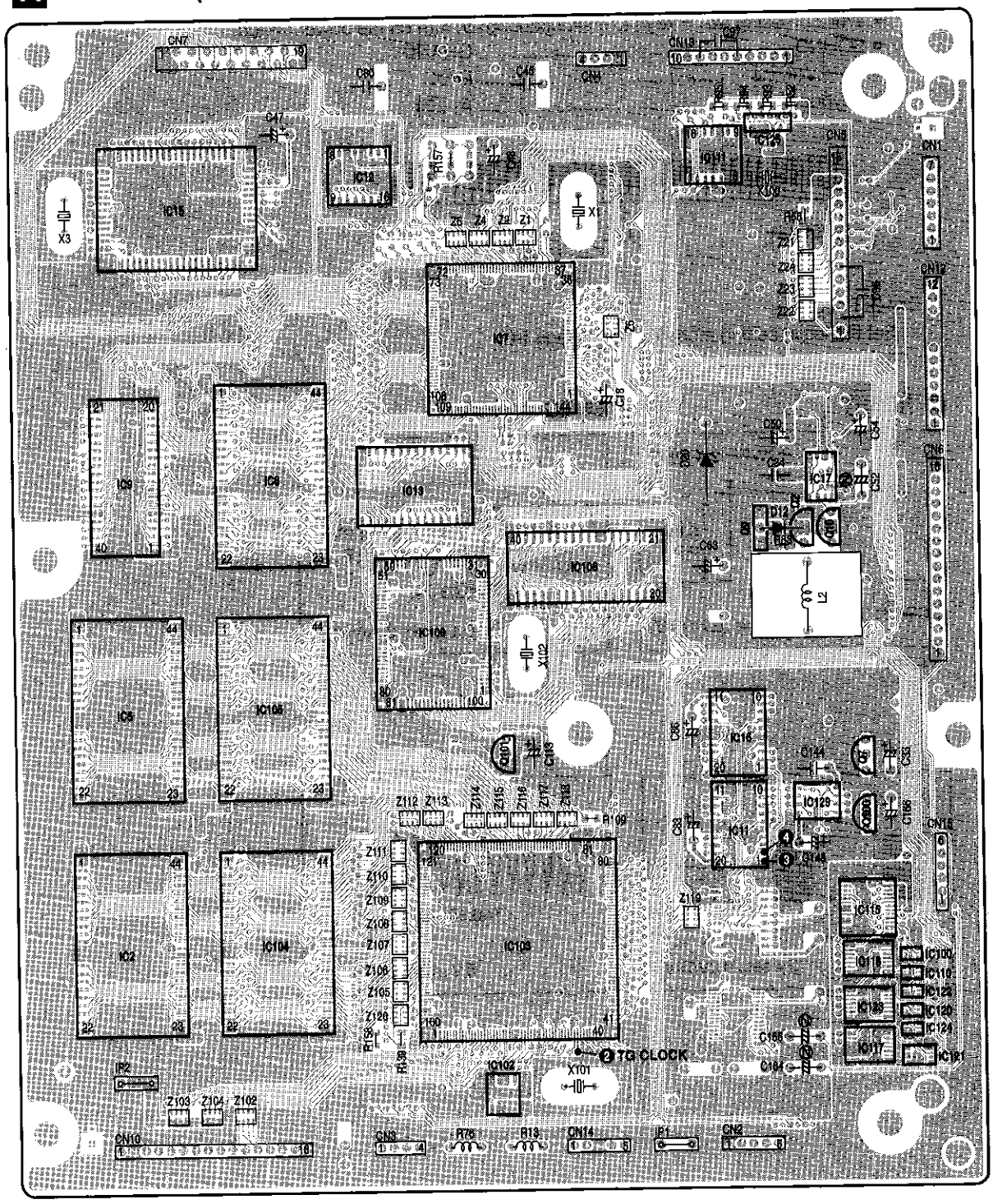
❸



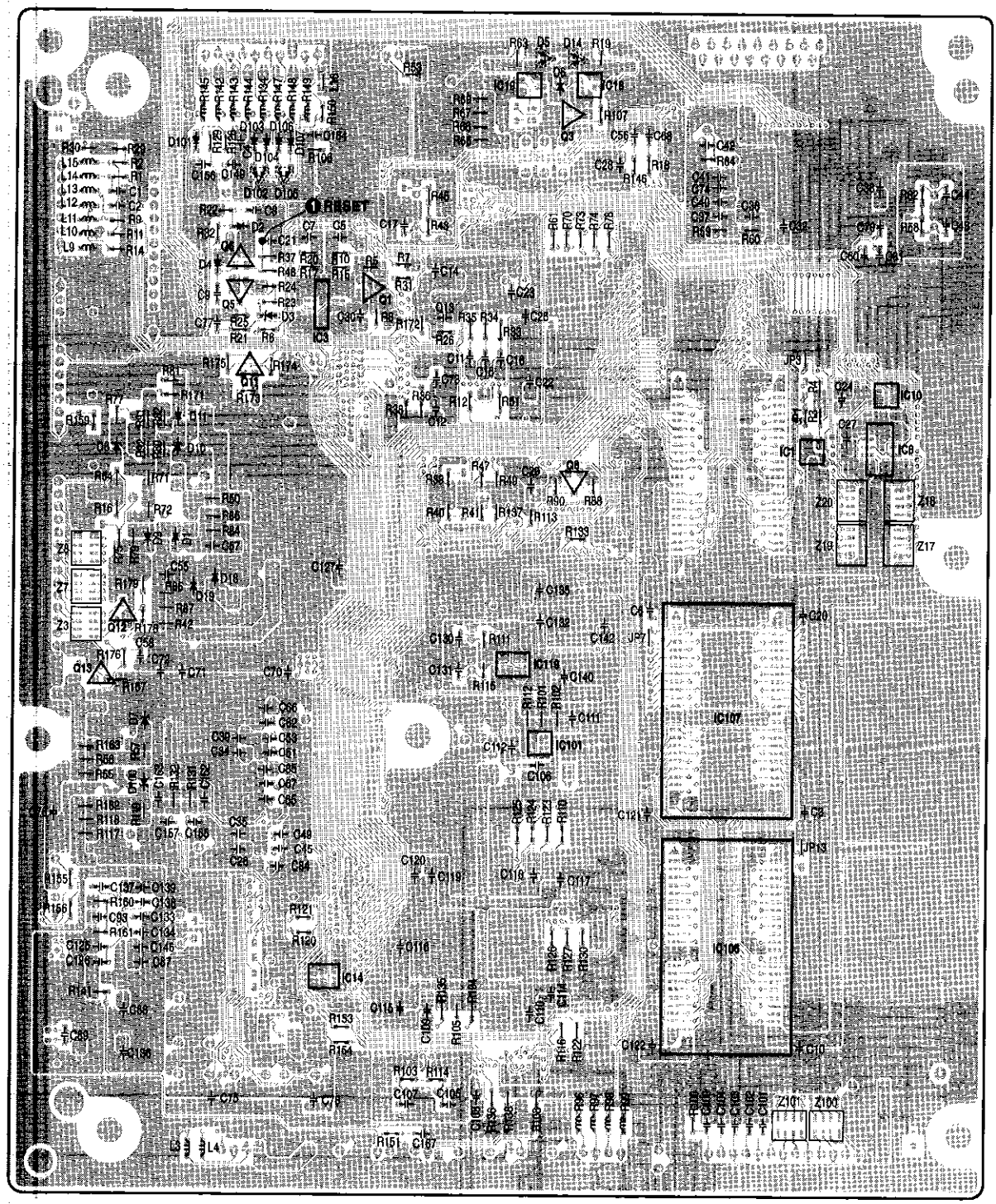
❹

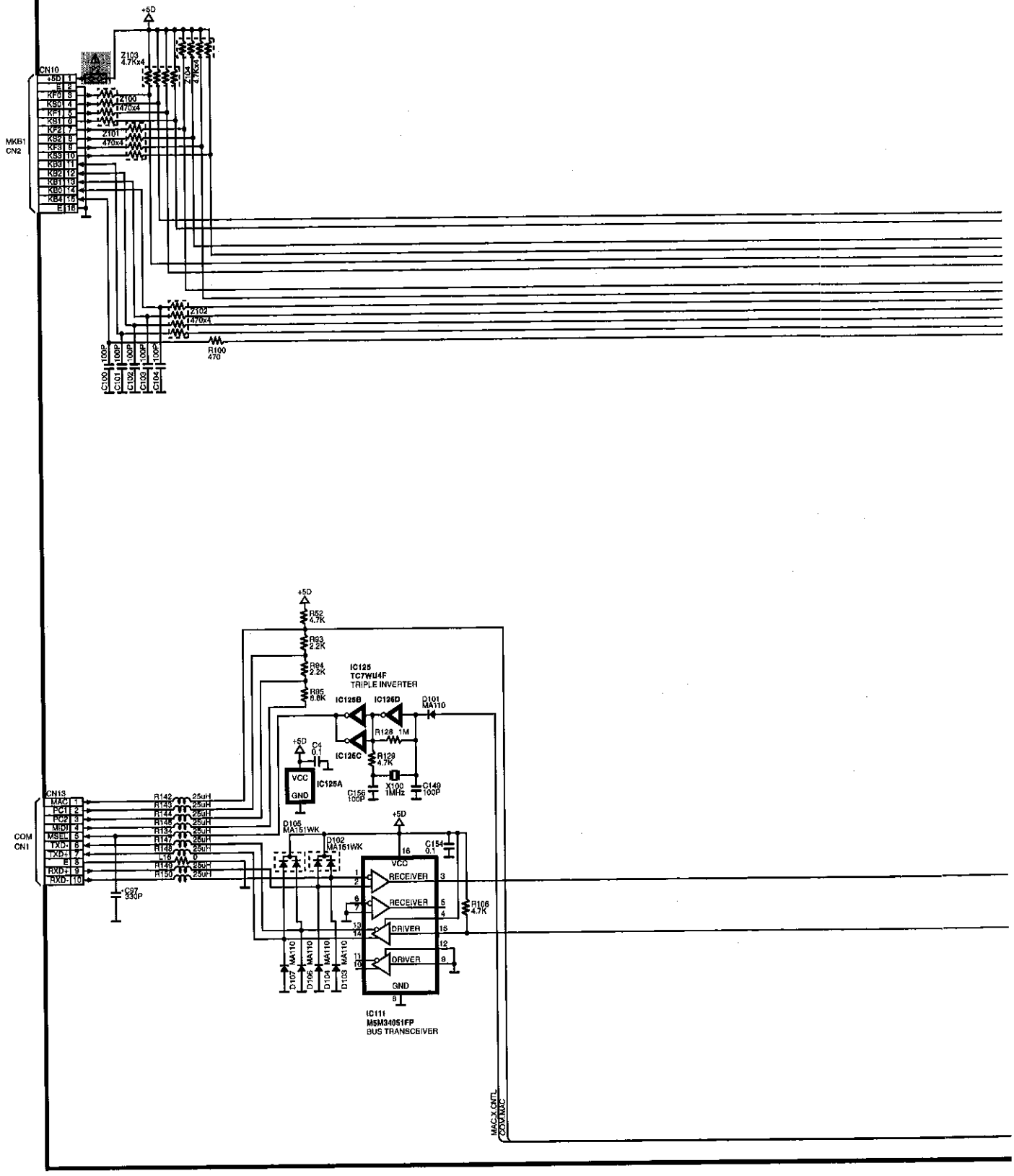


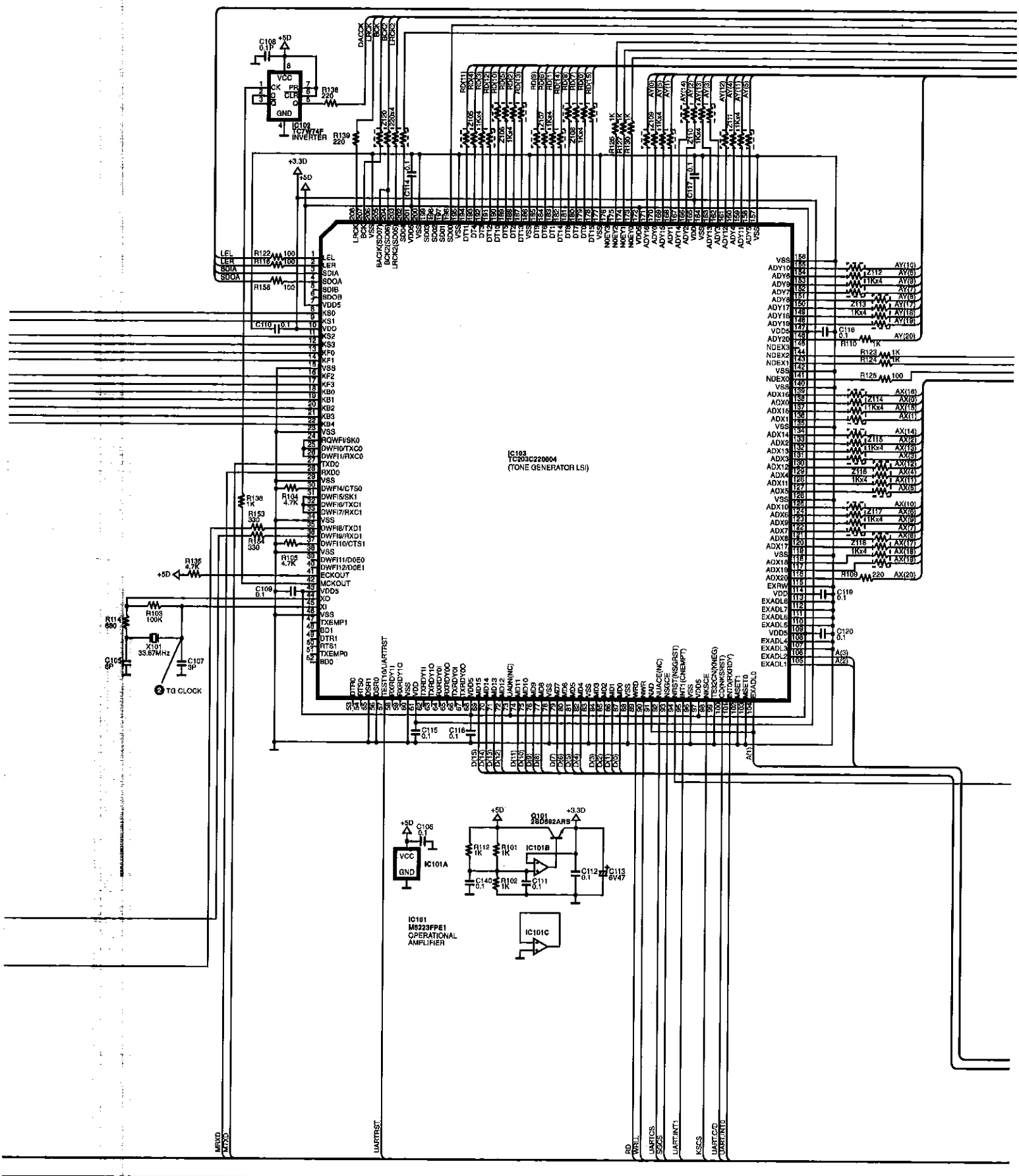
A MAIN P.C.B.(COMPONENT SIDE)

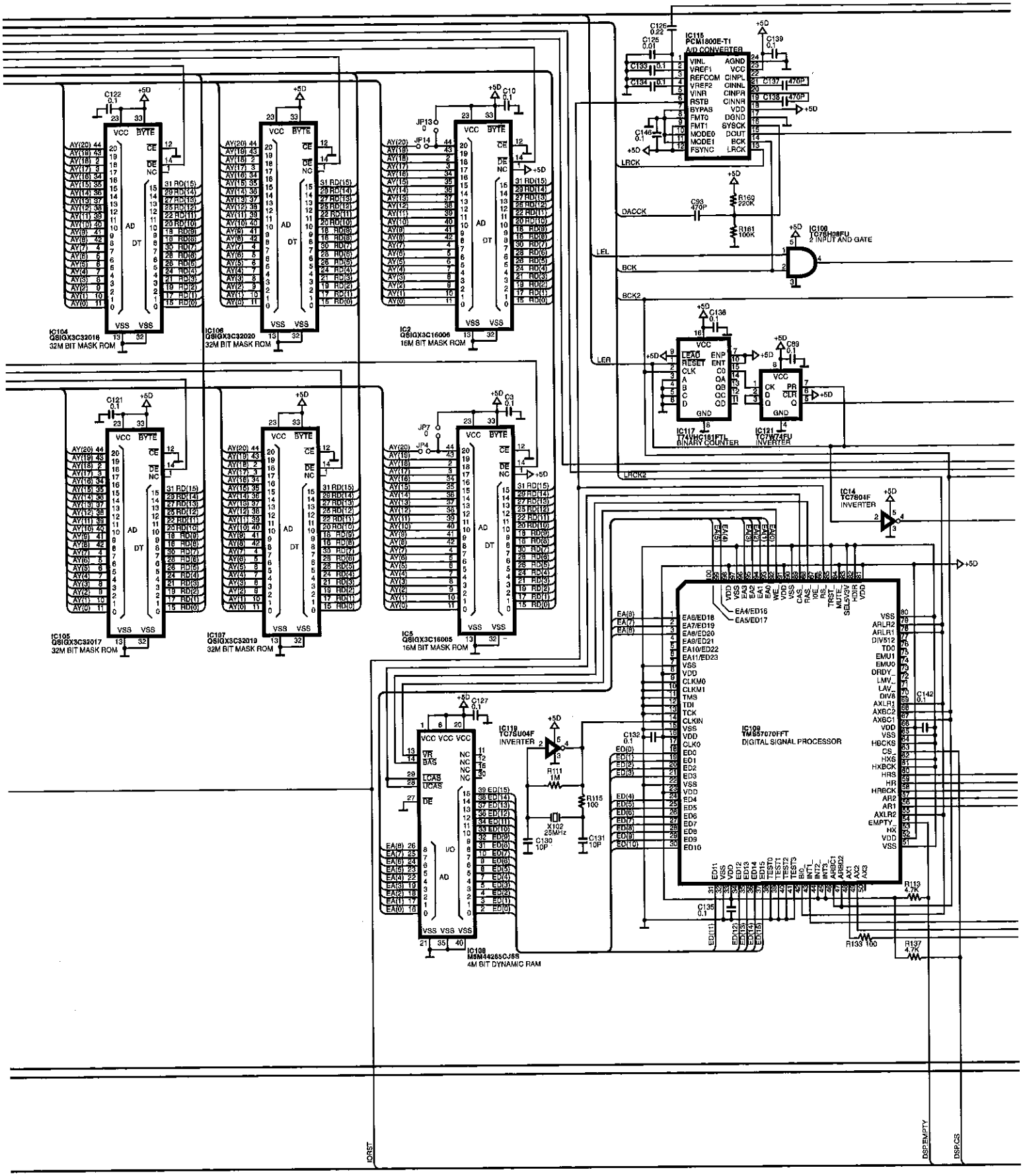


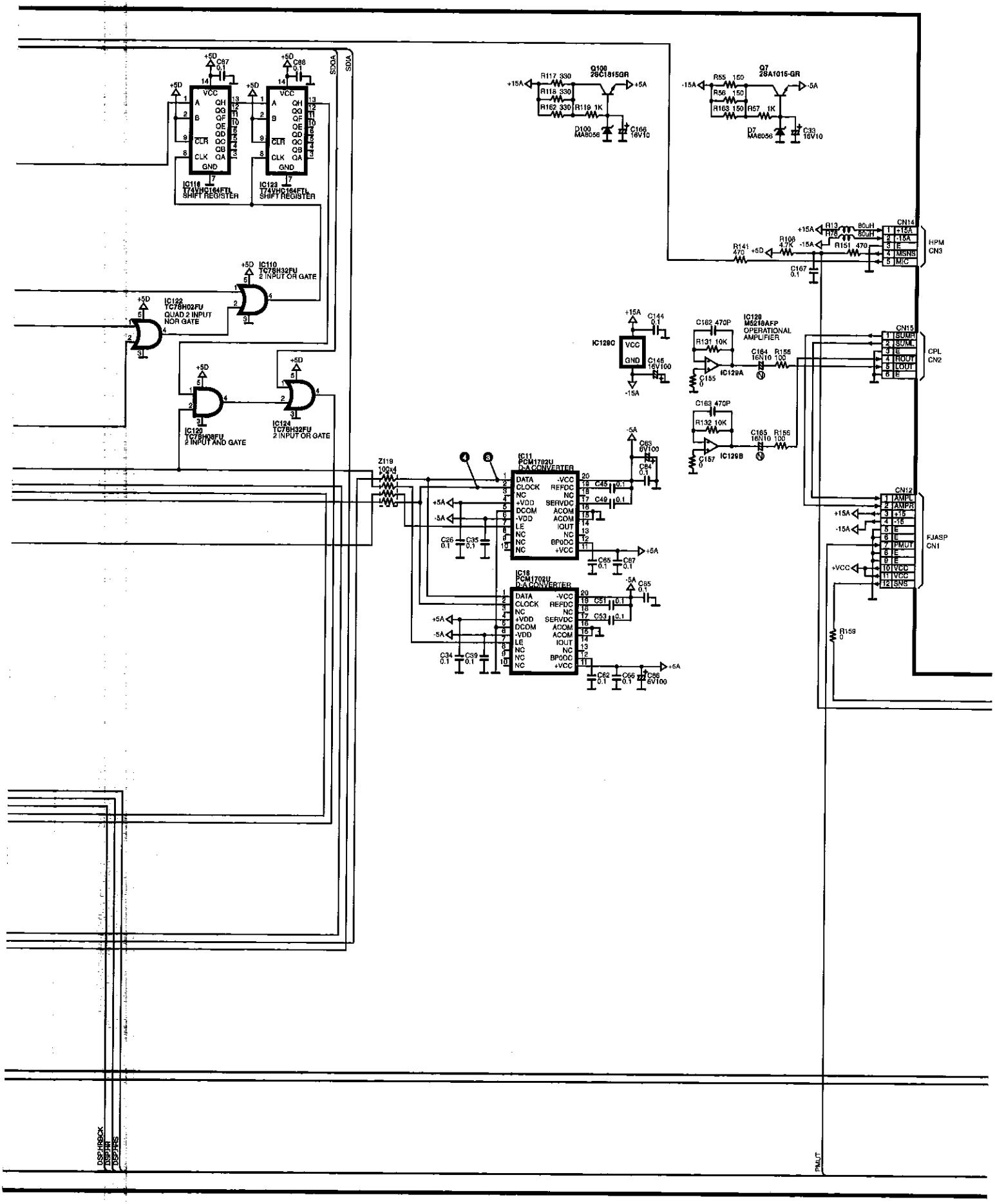
A MAIN P.C.B. (FOIL SIDE)

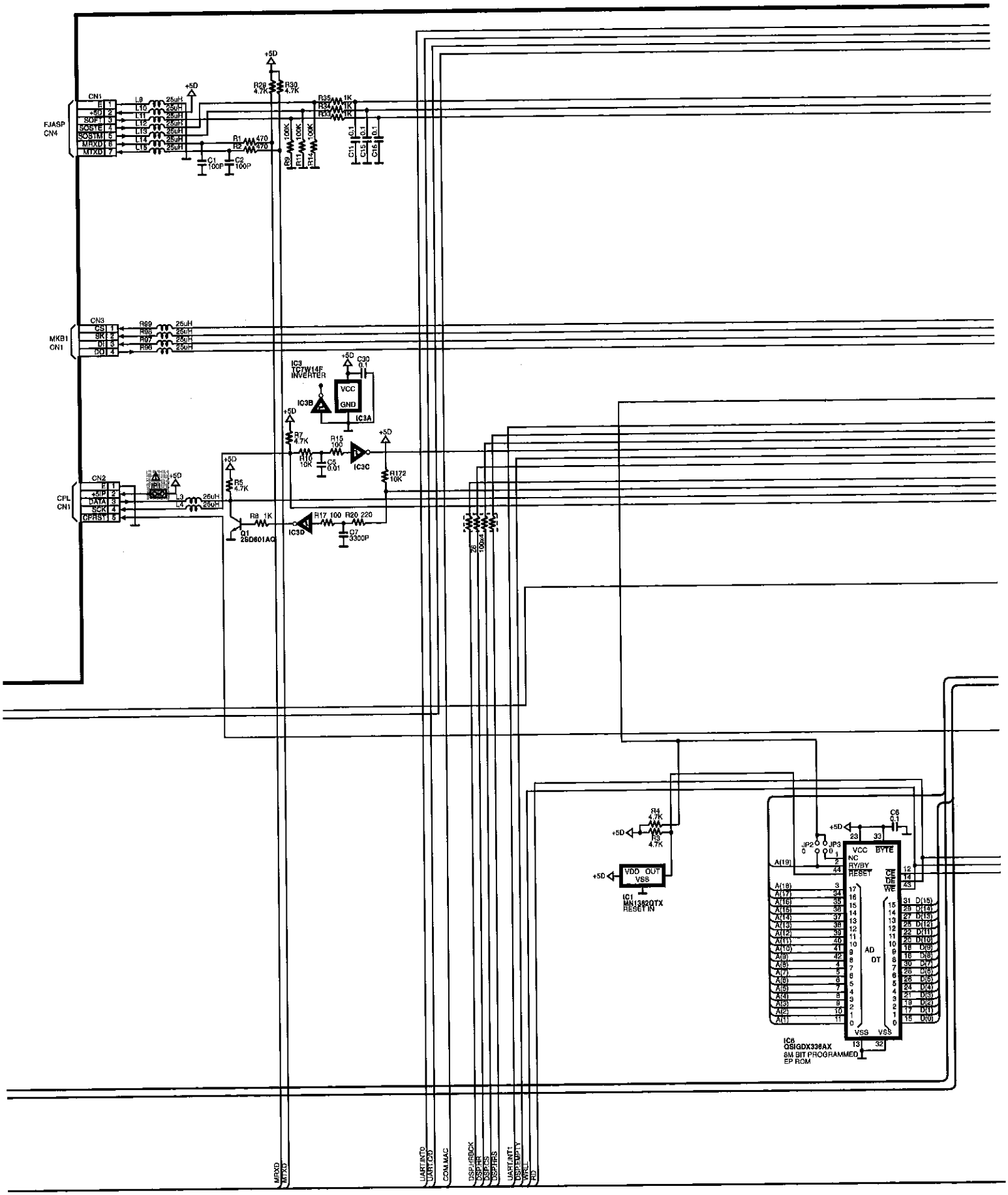


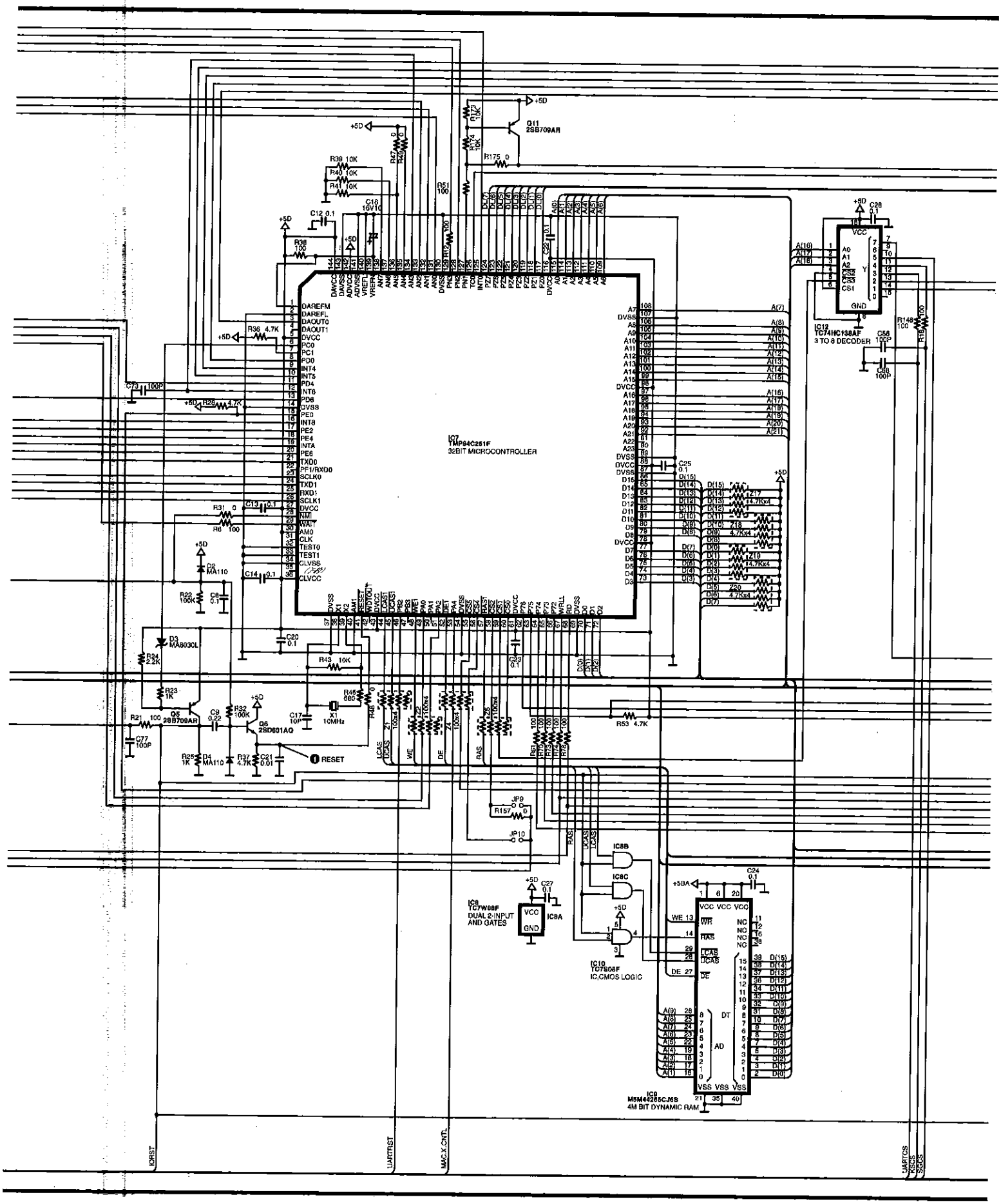

+5D
Z103 4.7Kx4
Z104 4.7Kx4
CN10
MKB1 CN2
Z100 1470x4
Z101 470x4
Z102 1470x4
R100 470
C100 100P
C101 100P
C102 100P
C103 100P
C104 100P
R52 4.7K
R93 2.2K
R94 2.2K
R95 6.8K
IC125
TC7W14F
TRIPLE INVERTER
IC125B
IC125D
D101 MA110
R128 1M
IC125C
R129 4.7K
X100 1MHz
C149 100P
C156 100P
C4 0.1
IC125A
VCC
GND
CN13
COM CN1
R142 25uH
R143 25uH
R144 25uH
R145 25uH
R134 25uH
R147 25uH
R148 25uH
R149 25uH
R150 25uH
C97 330P
D105 MA151WK
D102 MA151WK
C154 0.1
RECEIVER
RECEIVER
DRIVER
DRIVER
R106 4.7K
D107 MA110
D106 MA110
D104 MA110
D103 MA110
IC111
M5M34051FP
BUS TRANSCEIVER
MAC-X CNTL
COM MAC

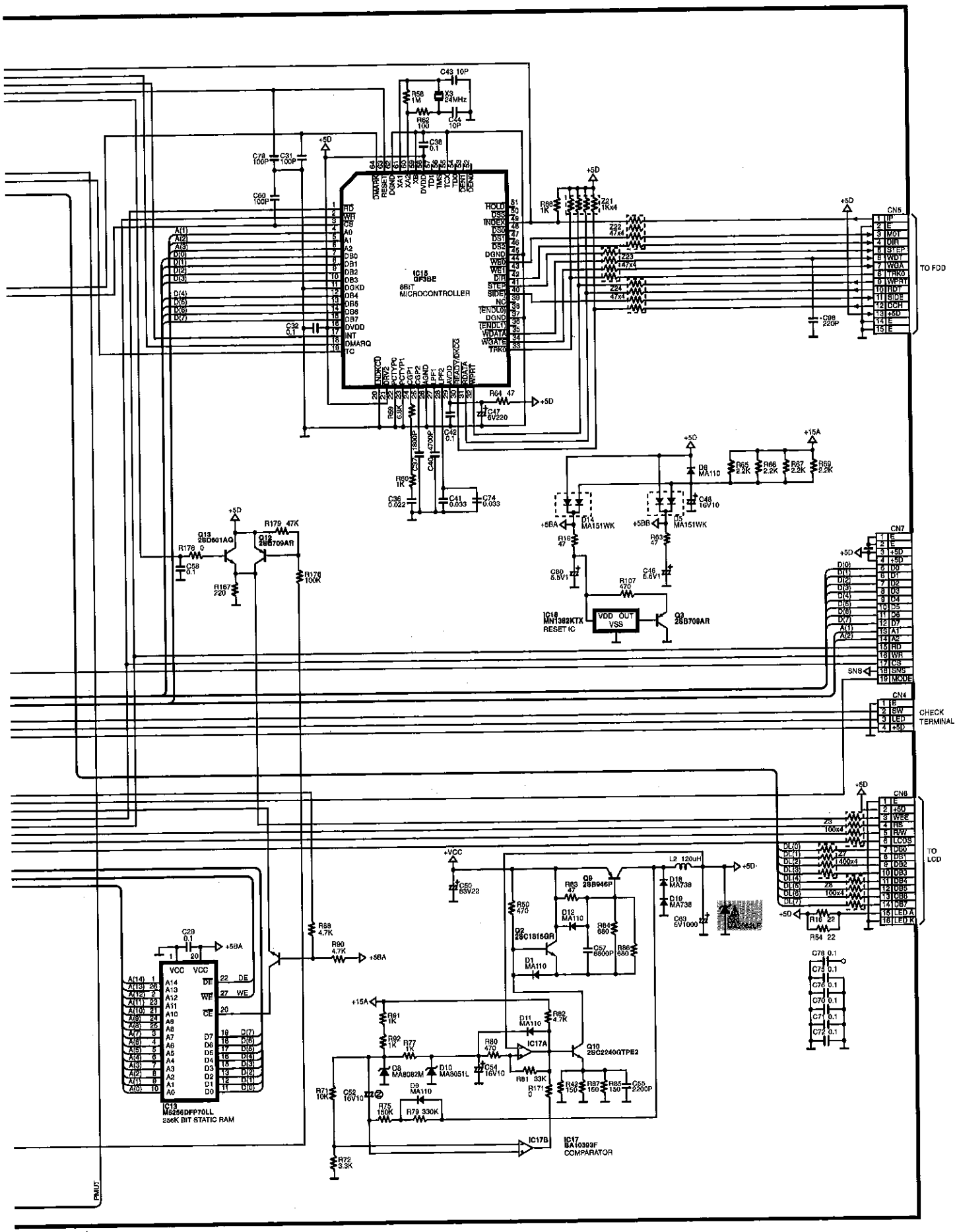

IC103
TC203C220004
(TONE GENERATOR LSI)
IC102
TC7W74F
INVERTER
IC101
M5223FPE1
OPERATIONAL
AMPLIFIER
IC101A
IC101B
IC101C
Q101
2SD592ARS
X101
33.87MHz
TO CLOCK
+5D
+3.3D
MRXD
MTXD
UARTRST
SD
WRITE
UARTCS
SSCS
UART.INT1
KSCS
UART.C/D
UART.INT0


IC104
GSIGX3C32016
32M BIT MASK ROM
IC106
GSIGX3C32020
32M BIT MASK ROM
IC2
GSIGX3C16006
16M BIT MASK ROM
IC105
GSIGX3C32017
32M BIT MASK ROM
IC107
GSIGX3C32019
32M BIT MASK ROM
IC5
GSIGX3C16005
16M BIT MASK ROM
IC115
PCM1800E-T1
A/D CONVERTER
IC100
TC7SH08FU
2 INPUT AND GATE
IC117
T74VHC161FTL
BINARY COUNTER
IC121
TC7W74FU
INVERTER
IC14
TC7S04F
INVERTER
IC118
TC7SU04F
INVERTER
IC109
TMS57070FFT
DIGITAL SIGNAL PROCESSOR
IC108
M5M44265CJSS
4M BIT DYNAMIC RAM
LRCK
DACCK
LEL
BCK
BCK2
LER
LRCK2
IORST
DSPEMPTY
DSPCS

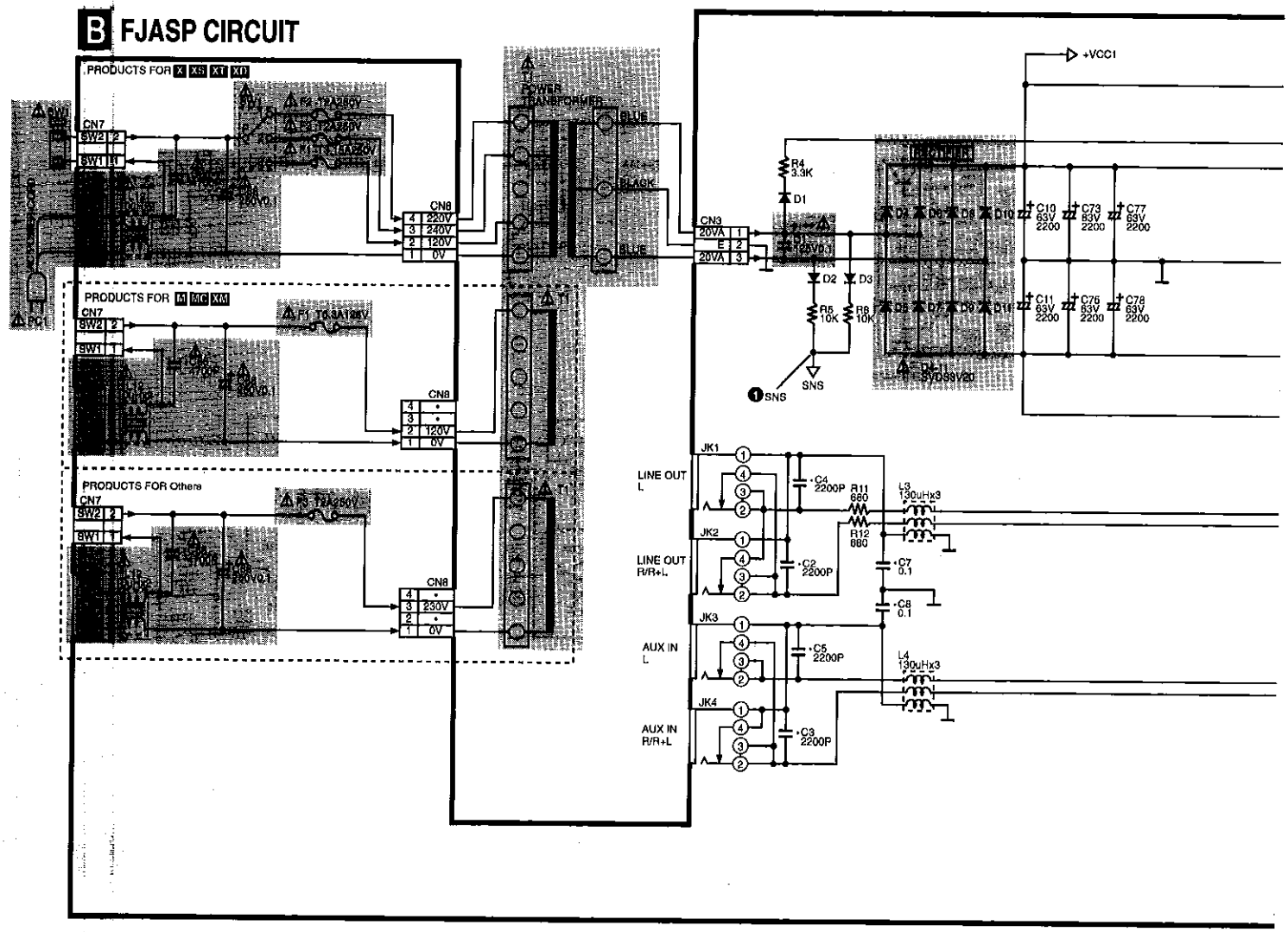

IC116
T74VHC164FTL
SHIFT REGISTER
IC123
T74VHC164FTL
SHIFT REGISTER
IC110
TC78H32FU
2 INPUT OR GATE
IC122
TC78H02FU
QUAD 2 INPUT
NOR GATE
IC120
TC78H08FU
2 INPUT AND GATE
IC124
TC78H32FU
2 INPUT OR GATE
Q100
2SC1815GR
Q7
2SA1015-GR
D100
MA8056
D7
MA8056
IC129C
IC129A
IC129B
IC129
M5218AFP
OPERATIONAL
AMPLIFIER
IC11
PCM1702U
D-A CONVERTER
IC16
PCM1702U
D-A CONVERTER
Z119
100X4
CN14
CN15
CN12
HPM
CN3
CPL
CN2
FJASP
CN1
SDOA
SCOA
DSPHRBCK
DSPHR
DSPRRS
PMUT


CN1
FJASP
CN4
E
+5D
SOF
SOBTE
SOBTM
MRXD
MTXD
L9 25uH
L10 25uH
L11 25uH
L12 25uH
L13 25uH
L14 25uH
L15 25uH
R1 470
R2 470
C1 100P
C2 100P
R29 4.7K
R30 4.7K
R35 1K
R37 1K
R39 1K
R9 100K
R11 100K
R14 100K
C11 0.1
C15 0.1
C16 0.1
CN3
MKB1
CN1
CS
SK
DI
DO
R89 25uH
R98 25uH
R97 25uH
R96 25uH
IC3
TC7W14F
INVERTER
VCC
GND
IC3B
IC3A
C30 0.1
R7 4.7K
R15 100
R10 10K
C5 0.01
IC3C
R172 10K
CN2
CPL
CN1
DATA
SCK
CPRST
L3 26uH
L4 25uH
R5 4.7K
R8 1K
Q1
2SD601AC
IC3D
R17 100
R20 220
C7 3300P
R4 4.7K
R3 4.7K
VDD OUT
VSS
IC1
MN1382QTX
RESET IN
C6 0.1
JP2
JP3
VCC
NC
RY/BY
RESET
BYTE
CE
OE
WE
A(19)
A(18)
A(17)
A(16)
A(15)
A(14)
A(13)
A(12)
A(11)
A(10)
A(9)
A(8)
A(7)
A(6)
A(5)
A(4)
A(3)
A(2)
A(1)
AD
DT
VSS
D(15)
D(14)
D(13)
D(12)
D(11)
D(10)
D(9)
D(8)
D(7)
D(6)
D(5)
D(4)
D(3)
D(2)
D(1)
D(0)
IC6
QSIGDX336AX
8M BIT PROGRAMMED
EP ROM
MRXD
MTXD
UART INT0
UART OVD
COM.MAC
DSP.HRBCK
DSP.HR
DSP.RS
DSP.RES
UART.INT1
DSP.EMPTY
WRLL
RD

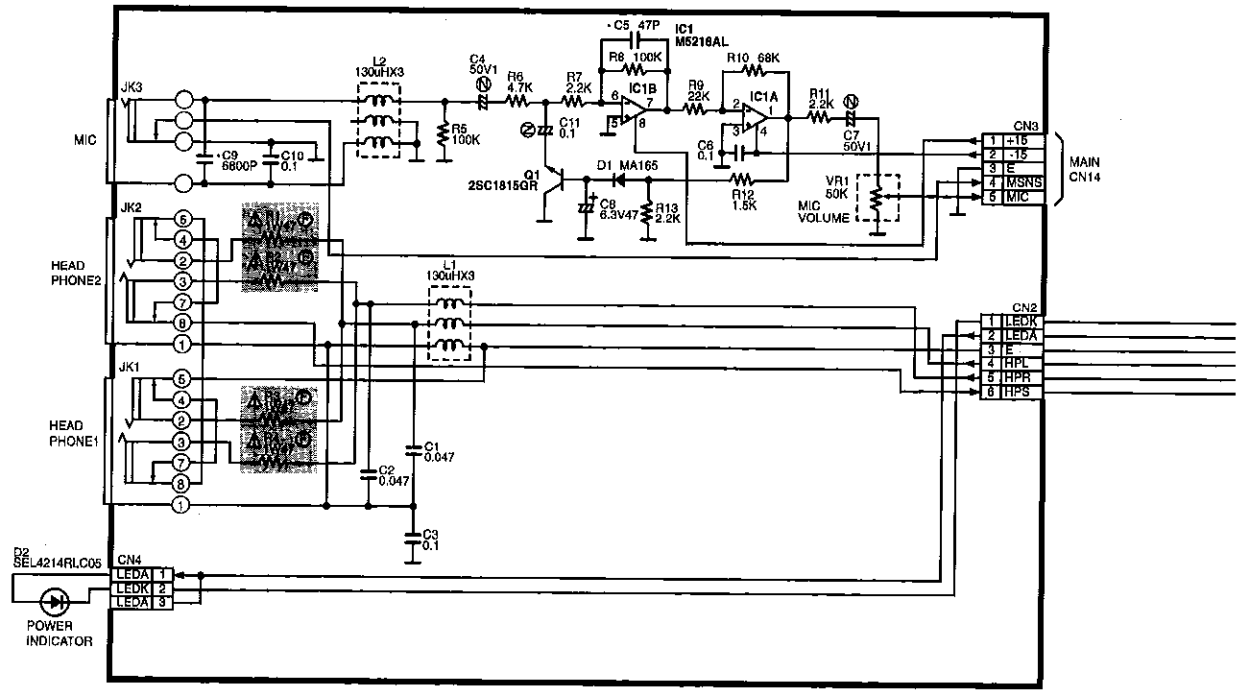

IC7
TMP94C251F
32BIT MICROCONTROLLER
IC12
TC74HC138AF
3 TO 8 DECODER
IC8
TC7W08F
DUAL 2-INPUT
AND GATES
IC10
TC7S08F
IC,CMOS LOGIC
IC9
M5M44265CJ6S
4M BIT DYNAMIC RAM
Q11
2SB709AR
Q5
2SB709AR
Q6
2SD601AQ
D2
MA110
D3
MA8030L
D4
MA110
X1
10MHz
RESET
IORST
UARTRST
MACX.CNTL
UARTCS
XSCS
SSCS

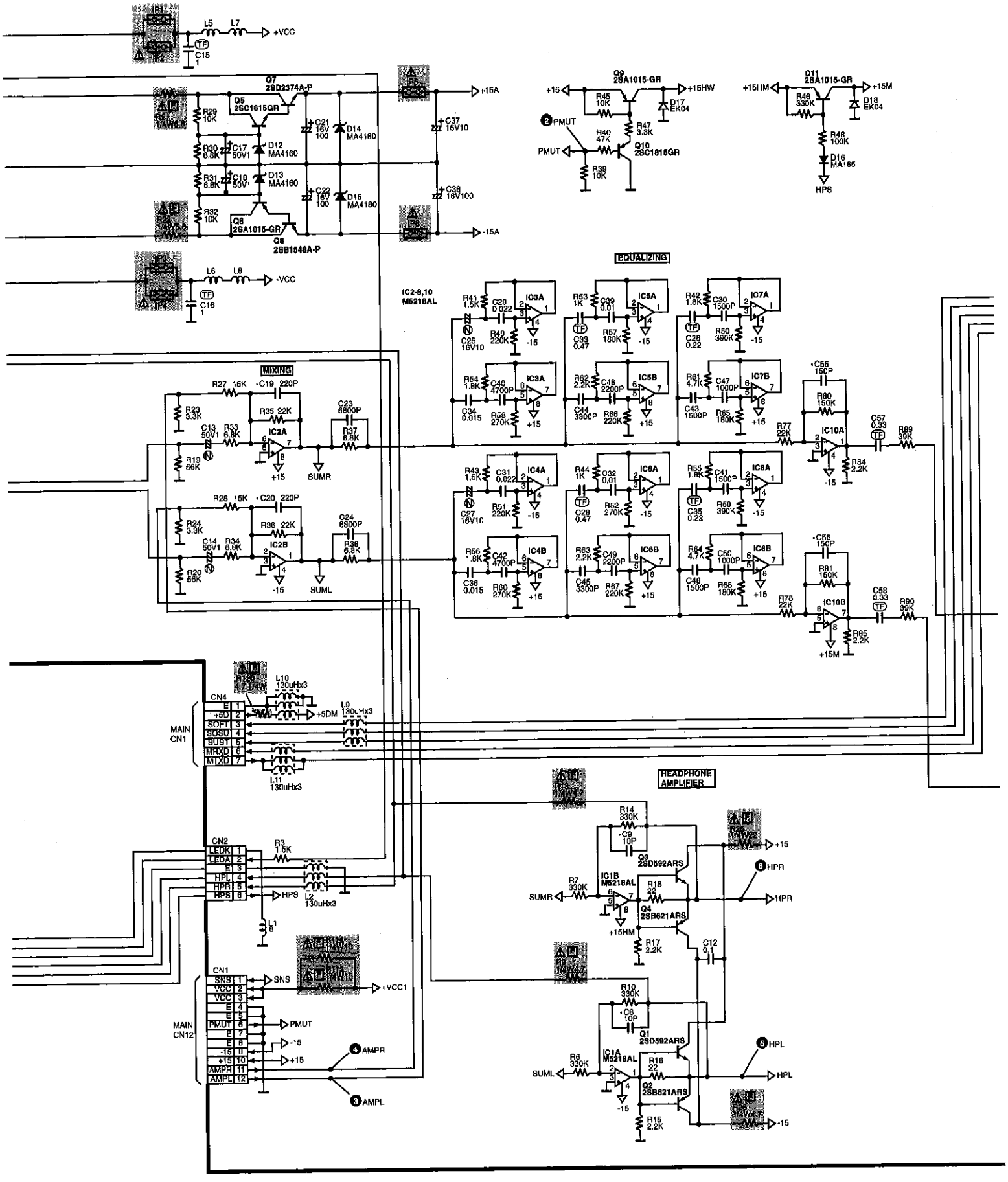

IC15
6P3BE
8BIT
MICROCONTROLLER
TO FDD
CHECK
TERMINAL
TO
LCD
IC18
MN1382KTX
RESET IC
IC18
M5256DFP70LL
256K BIT STATIC RAM
IC17
BA10393F
COMPARATOR
PMUT

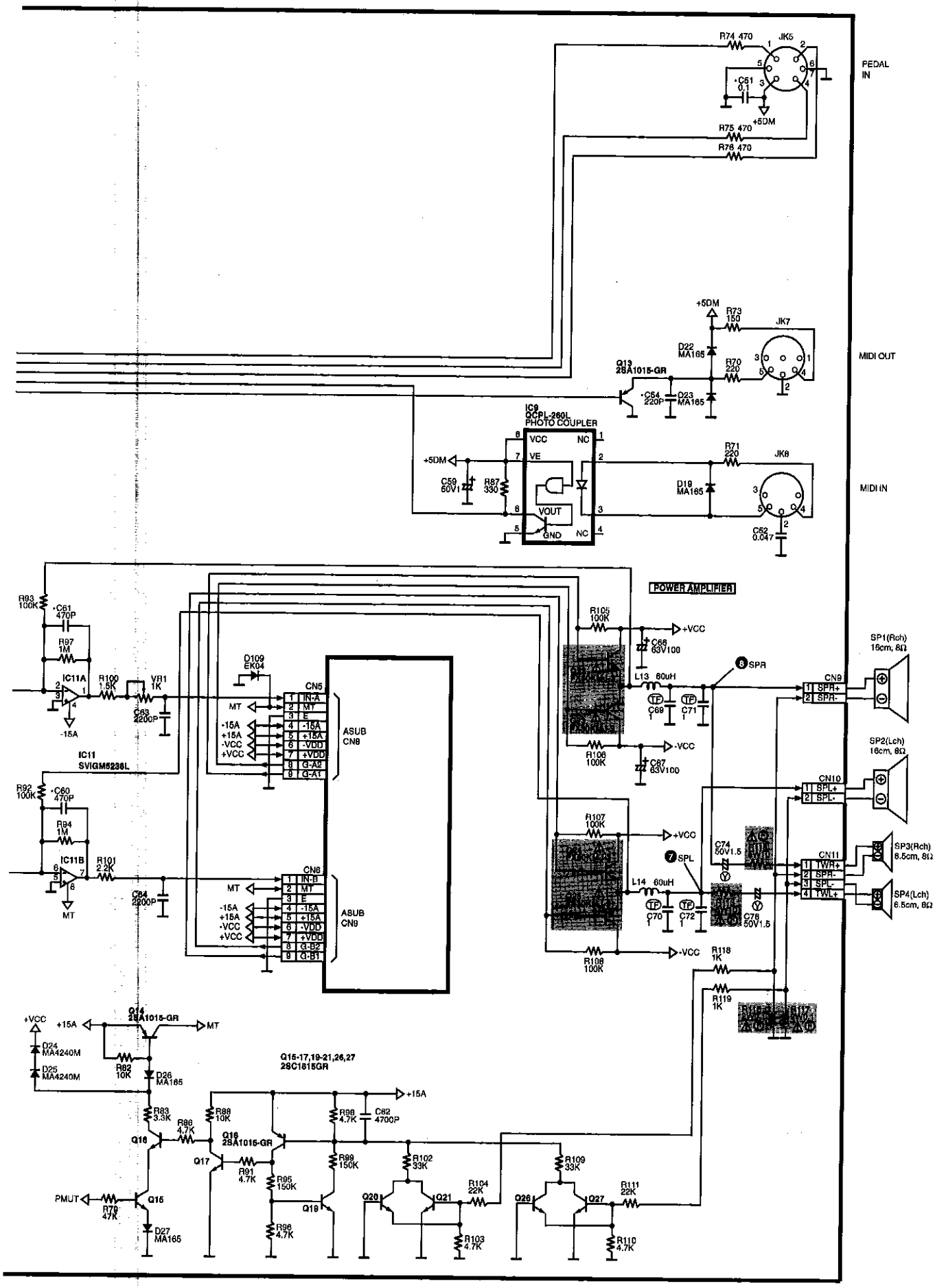
B FJASP CIRCUIT



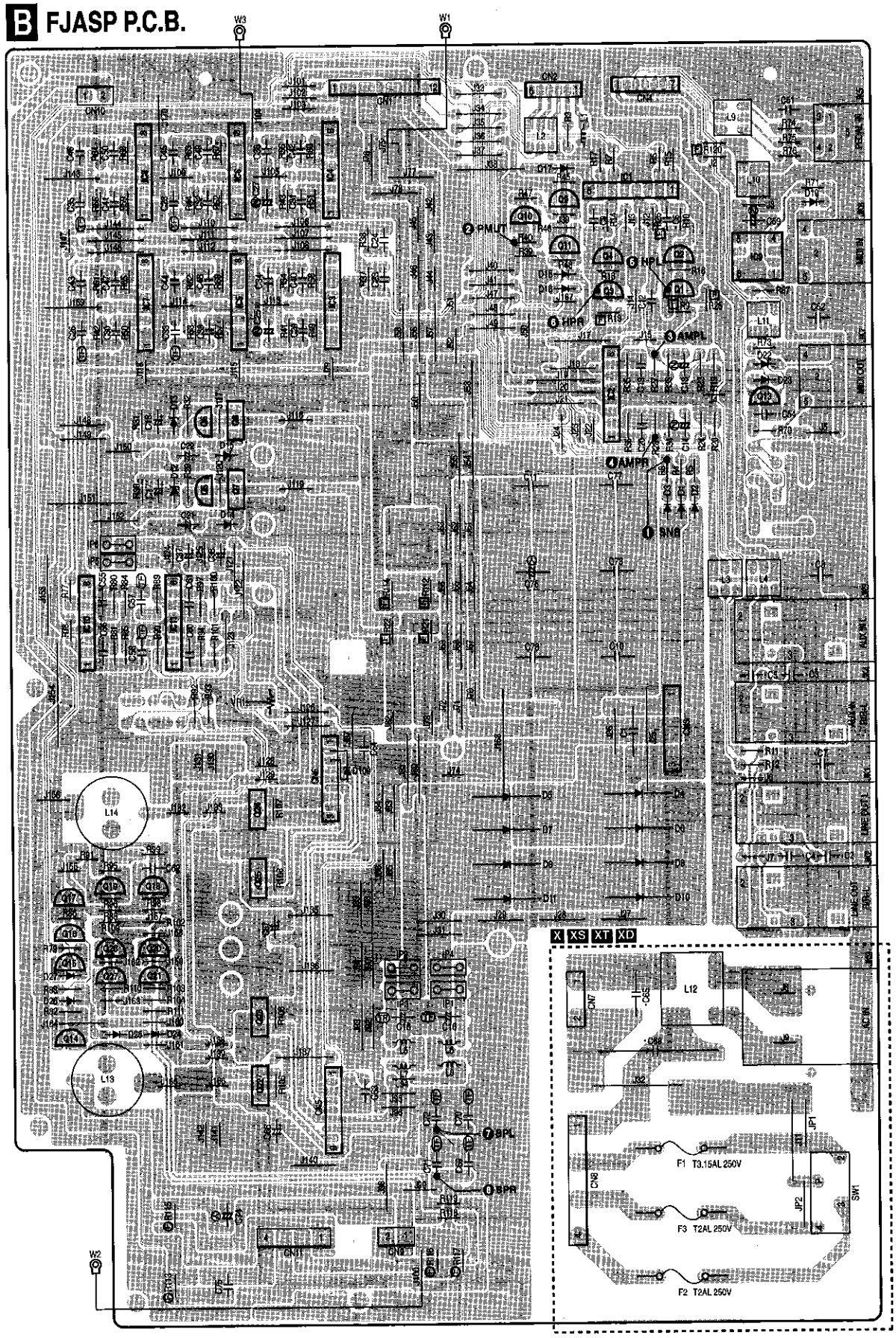
F HPM CIRCUIT




+VCC
L5
L7
C15
Q7
2SD2374A-P
Q5
2SC1815GR
Q8
2SA1015-GR
Q8
2SB1548A-P
D12
MA4160
D13
MA4160
D14
MA4160
D15
MA4160
+15A
-15A
-VCC
L6
L8
C16
Q9
2SA1015-GR
Q10
2SC1815GR
Q11
2SA1015-GR
D16
MA165
D17
EK04
D18
EK04
+15HW
+15M
+15HM
HPS
PMUT
EQUALIZING
IC2-6,10
M5218AL
MIXING
SUMR
SUML
HEADPHONE
AMPLIFIER
IC1B
M5218AL
IC1A
M5218AL
Q3
2SD592ARS
Q4
2SB621ARS
Q1
2SD592ARS
Q2
2SB621ARS
HPR
HPL
MAIN
CN1
MAIN
CN12
CN4
CN2
CN1
+5DM
SNS
+VCC1
AMPR
AMPL
L10
130uHx3
L9
130uHx3
L11
130uHx3
L2
130uHx3


PEDAL IN
MIDI OUT
MIDI IN
POWER AMPLIFIER
IC9 PHOTO COUPLER
IC11 SVIGM5236L
ASUB CN8
ASUB CN9
SP1(Rch) 16cm, 8Ω
SP2(Lch) 16cm, 8Ω
SP3(Rch) 6.5cm, 8Ω
SP4(Lch) 6.5cm, 8Ω
Q15-17,19-21,26,27 2SC1815GR

B FJASP P.C.B.

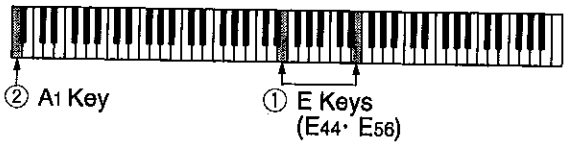

W3
W1
W5
PMUT
HPL
HPR
AMPL
AMPR
SNS
SPL
SPR
L14
L13
L12
X XS XT XD
F1 T3.15AL 250V
F3 T2AL 250V
F2 T2AL 250V
JP1
JP2
SW1
CN8

■ Measuring Condition of FJASP P.C.B.

Check Point ❸~❽

Set to the self-diagnostic mode followings.

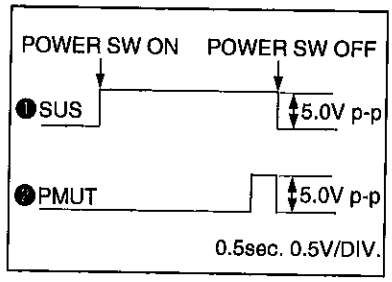
- While pressing two E keys (①) simultaneously, turn on the power switch.
- SOUND ..... GRAND
- Main Volume ..... MAX
- Keyboard ..... A_1 (②)



Check Point ❶, ❷

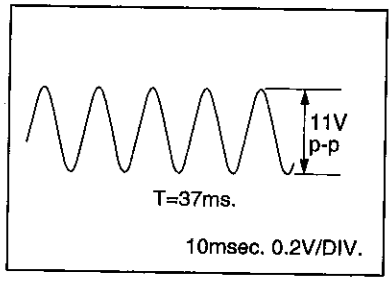
Set the initial setting mode (Refer to page I-6)

❶ SNS, ❷ PMUT

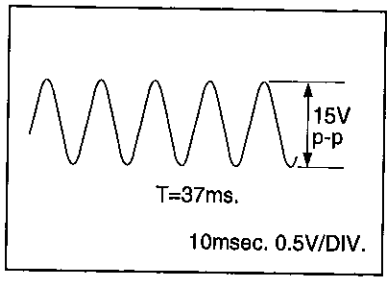


• Power SW..... ON → OFF

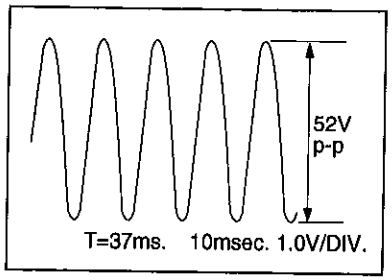
❸ AMPL, ❹ AMPR



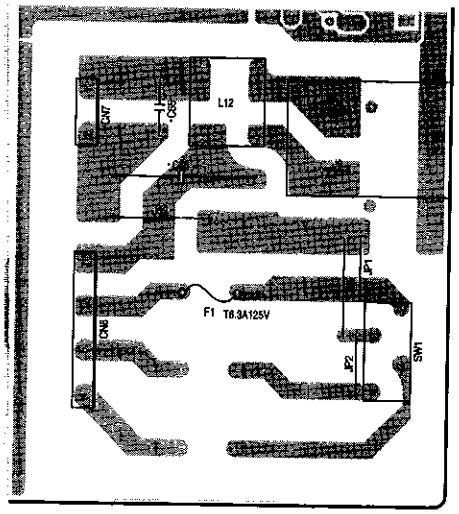
❺ HPL, ❻ HPR



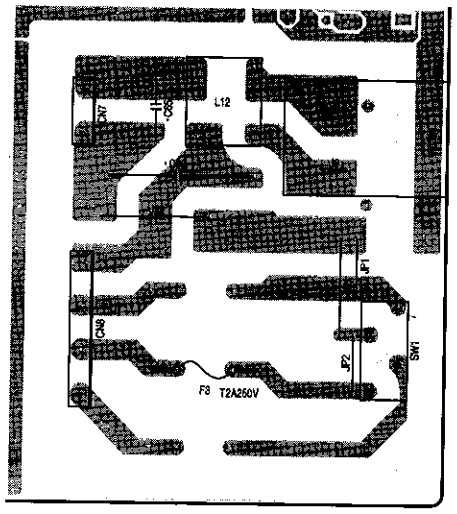
❼ SPL, ❽ SPR



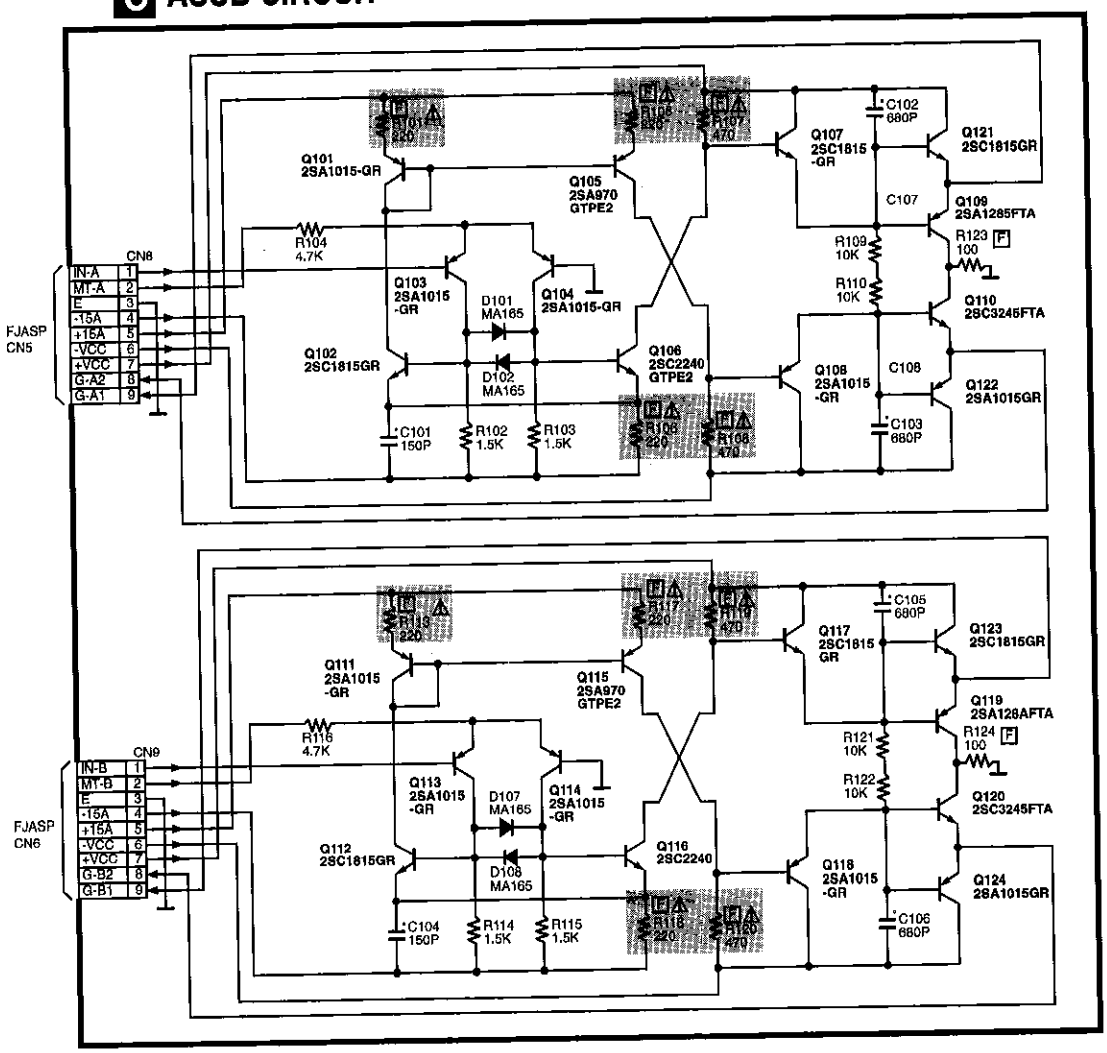
M MC XM



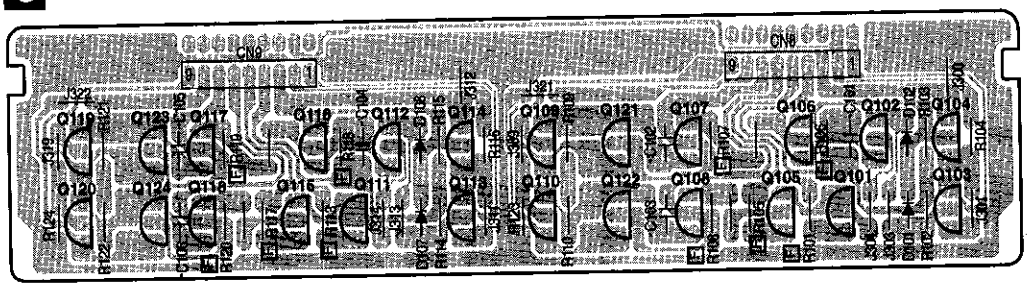
Others



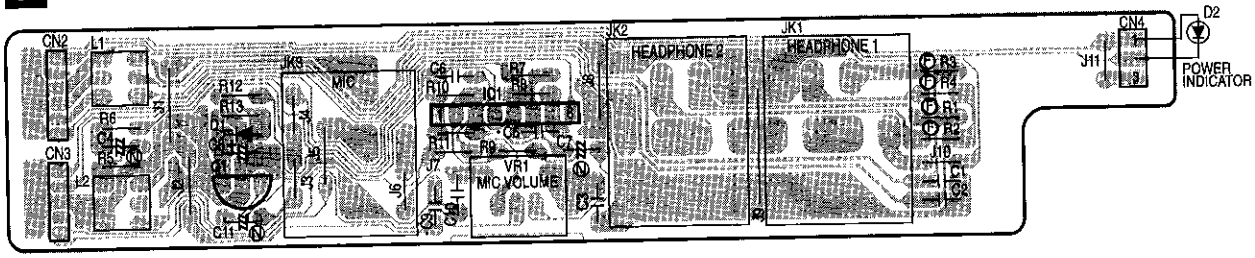
C ASUB CIRCUIT



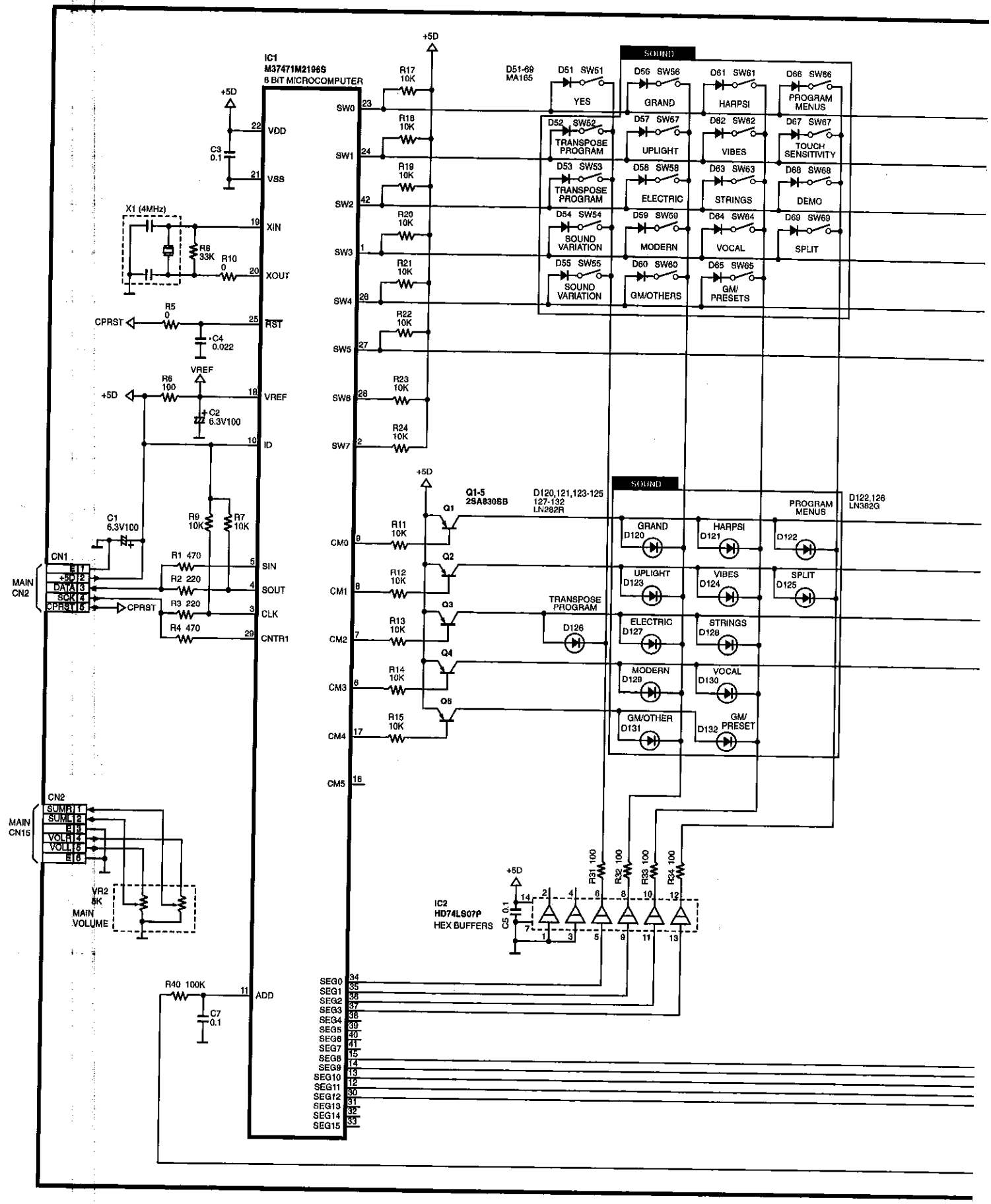
C ASUB P.C.B.



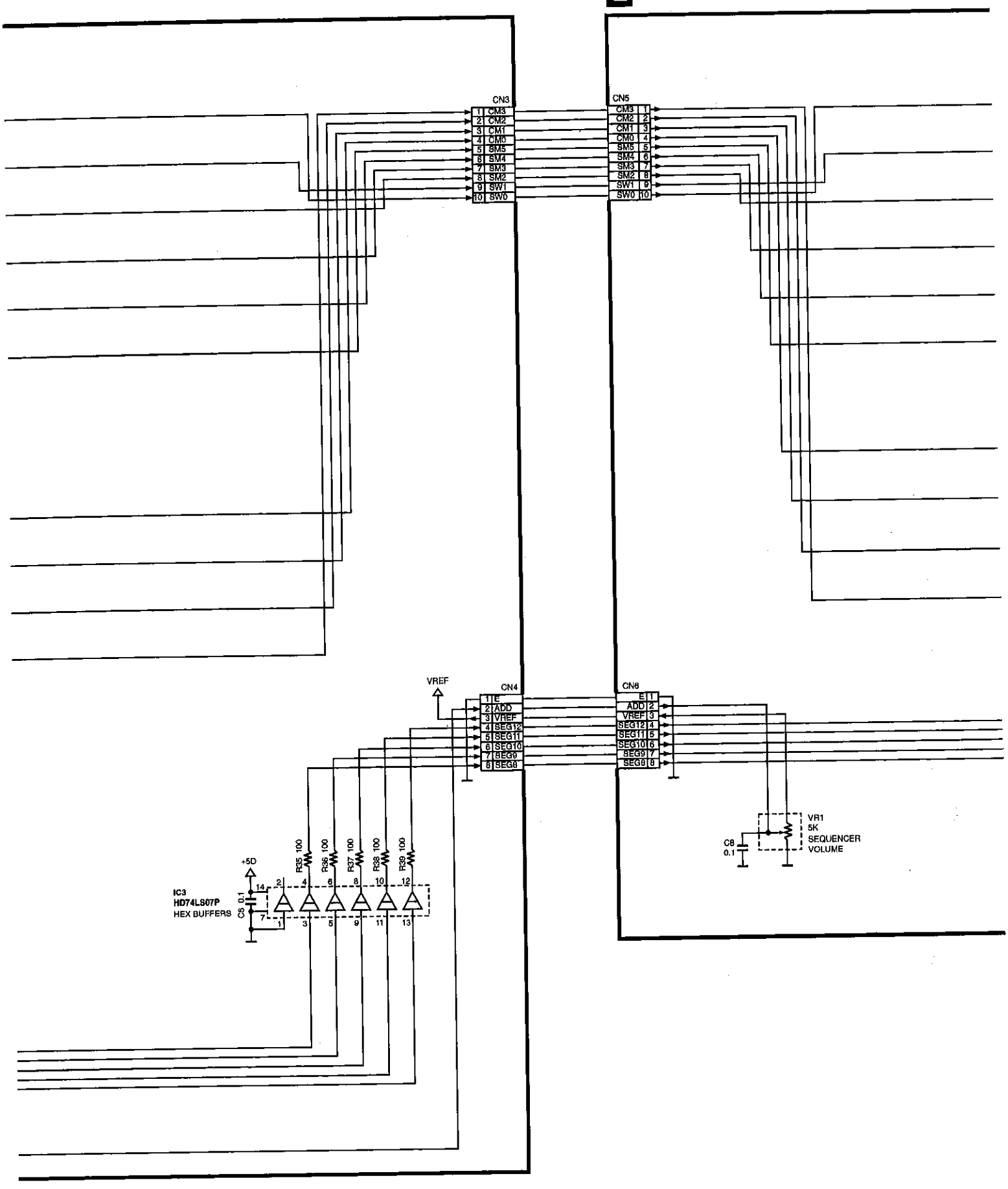
F HPM P.C.B.

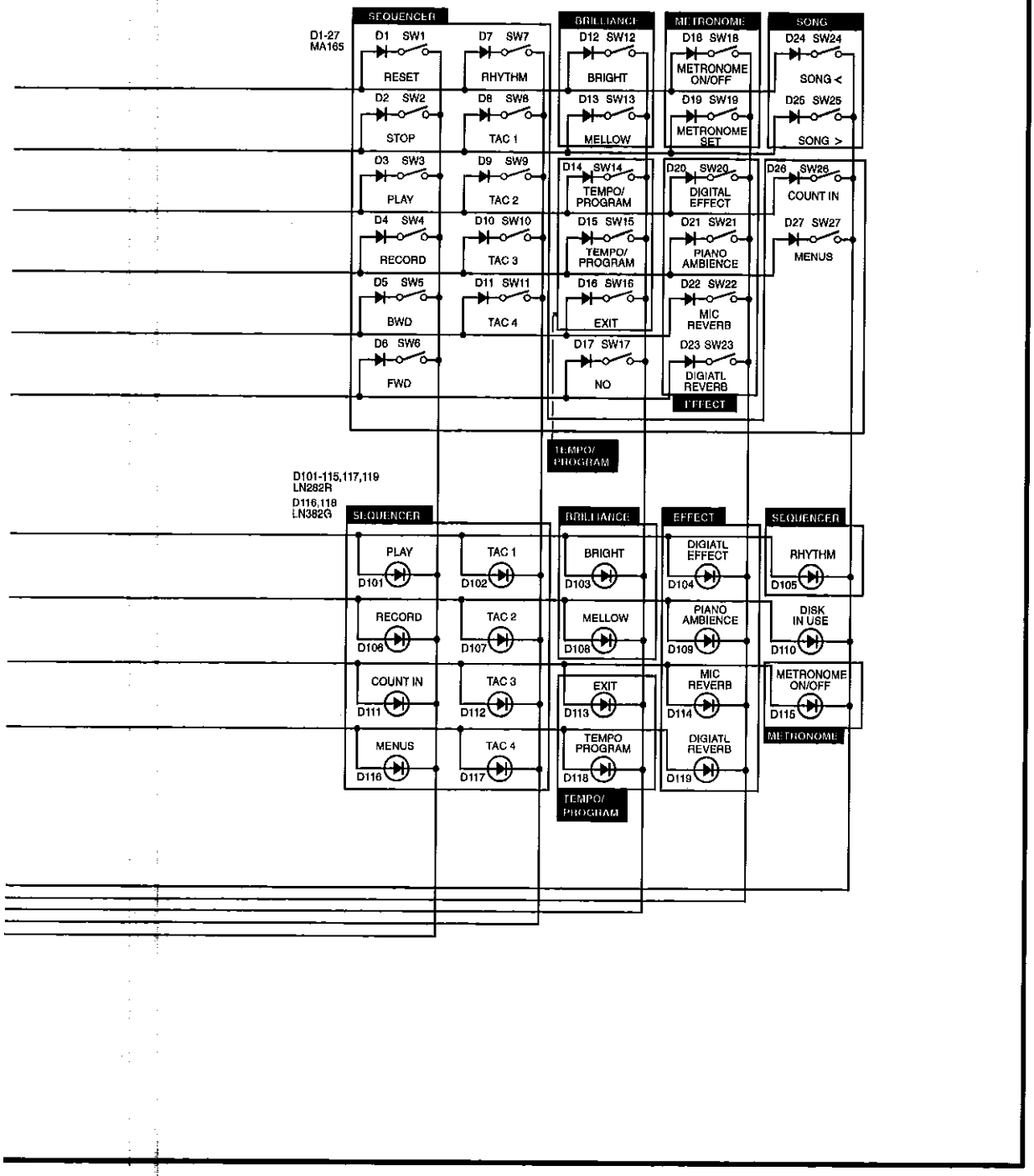


D CPL CIRCUIT

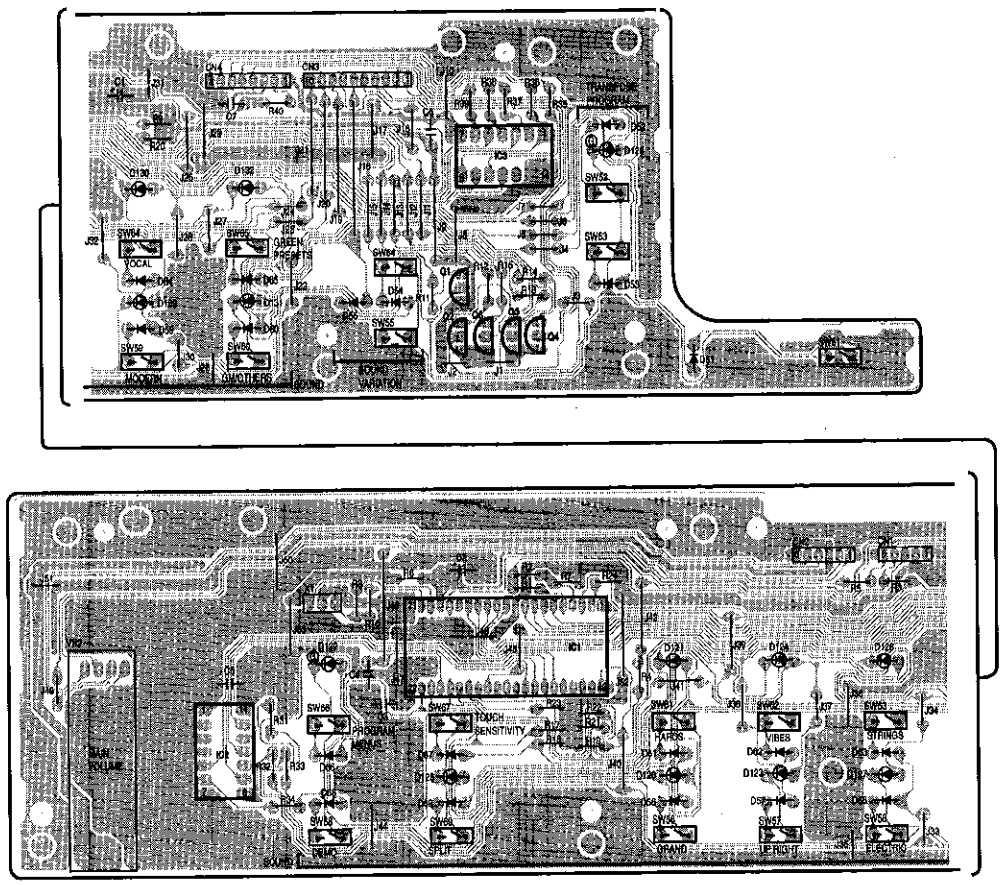


E CPR CIRCUIT

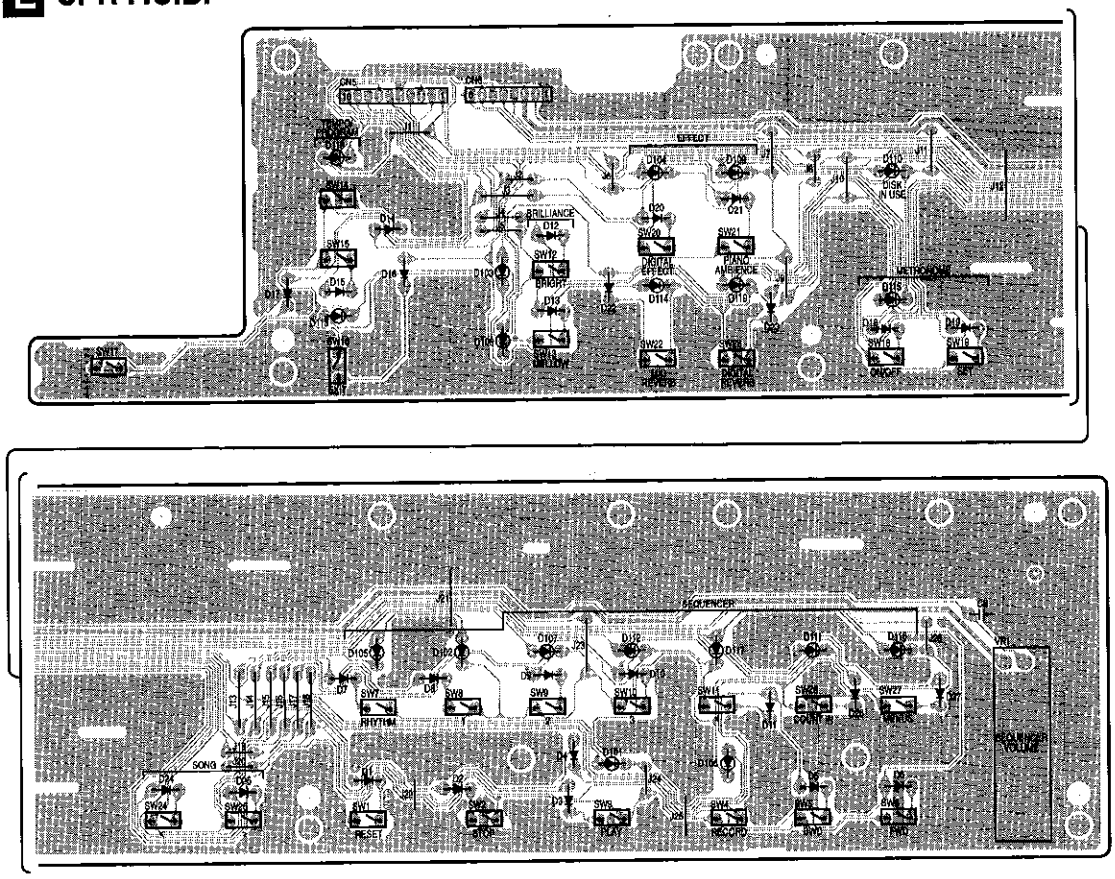



D1-27
MA165
SEQUENCER
D1 SW1
RESET
D2 SW2
STOP
D3 SW3
PLAY
D4 SW4
RECORD
D5 SW5
BWD
D6 SW6
FWD
D7 SW7
RHYTHM
D8 SW8
TAC 1
D9 SW9
TAC 2
D10 SW10
TAC 3
D11 SW11
TAC 4
BRILLIANCE
D12 SW12
BRIGHT
D13 SW13
MELLOW
D14 SW14
TEMPO/
PROGRAM
D15 SW15
TEMPO/
PROGRAM
D16 SW16
EXIT
D17 SW17
NO
METRONOME
D18 SW18
METRONOME
ON/OFF
D19 SW19
METRONOME
SET
D20 SW20
DIGITAL
EFFECT
D21 SW21
PIANO
AMBIENCE
D22 SW22
MIC
REVERB
D23 SW23
DIGIATL
REVERB
EFFECT
SONG
D24 SW24
SONG <
D25 SW25
SONG >
D26 SW26
COUNT IN
D27 SW27
MENUS
TEMPO/
PROGRAM
D101-115,117,119
LN282R
D116,118
LN382G
SEQUENCER
PLAY
D101
RECORD
D108
COUNT IN
D111
MENUS
D116
TAC 1
D102
TAC 2
D107
TAC 3
D112
TAC 4
D117
BRILLIANCE
BRIGHT
D103
MELLOW
D106
EXIT
D113
TEMPO
PROGRAM
D118
TEMPO/
PROGRAM
EFFECT
DIGIATL
EFFECT
D104
PIANO
AMBIENCE
D109
MIC
REVERB
D114
DIGIATL
REVERB
D119
SEQUENCER
RHYTHM
D105
DISK
IN USE
D110
METRONOME
ON/OFF
D115
METRONOME

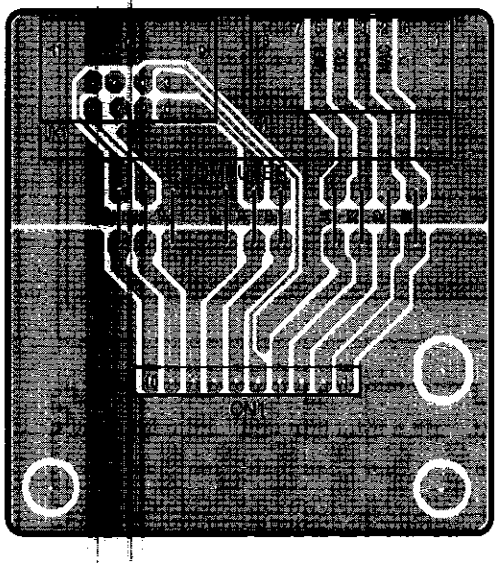
D CPL P.C.B.



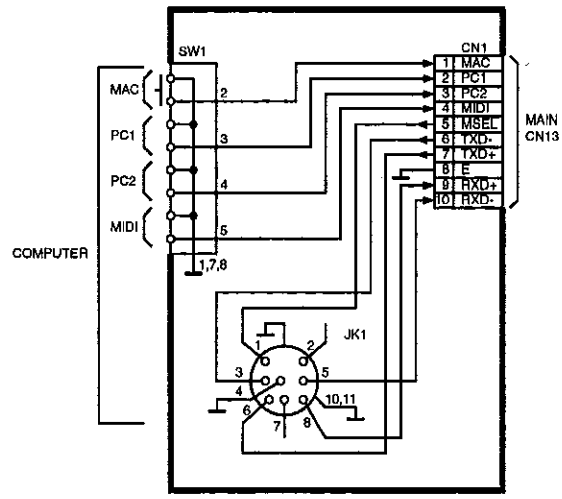
E CPR P.C.B.



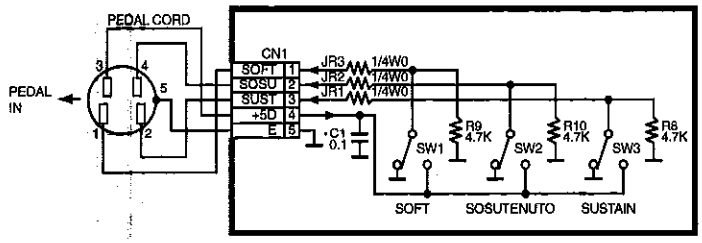
G COM P.C.B.



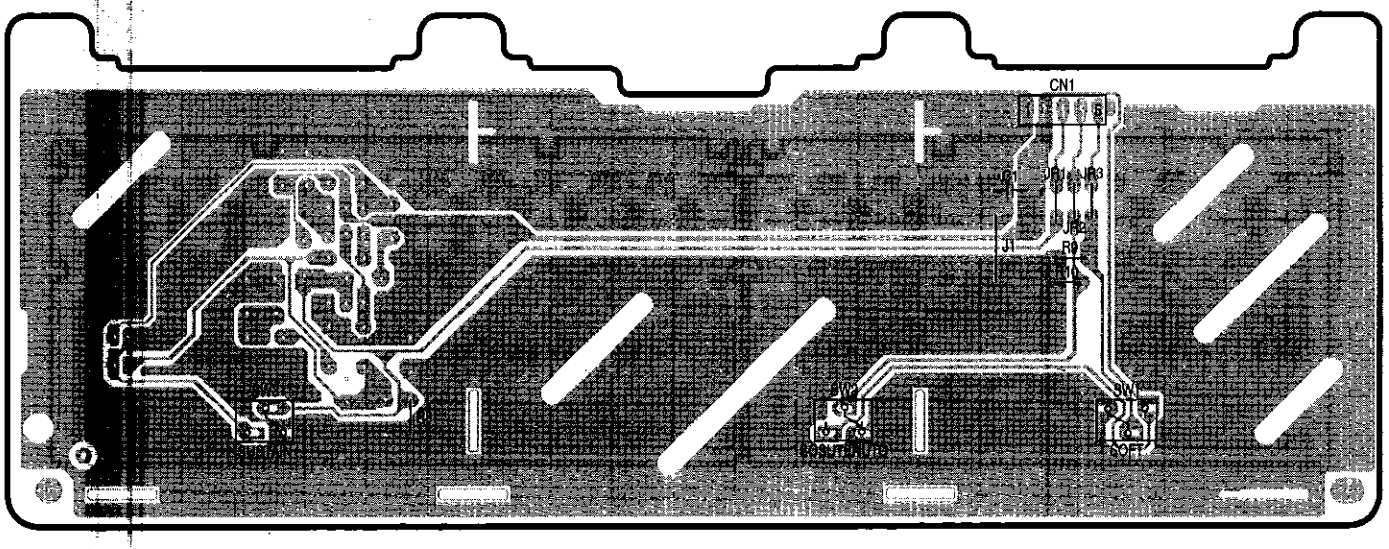
G COM CIRCUIT



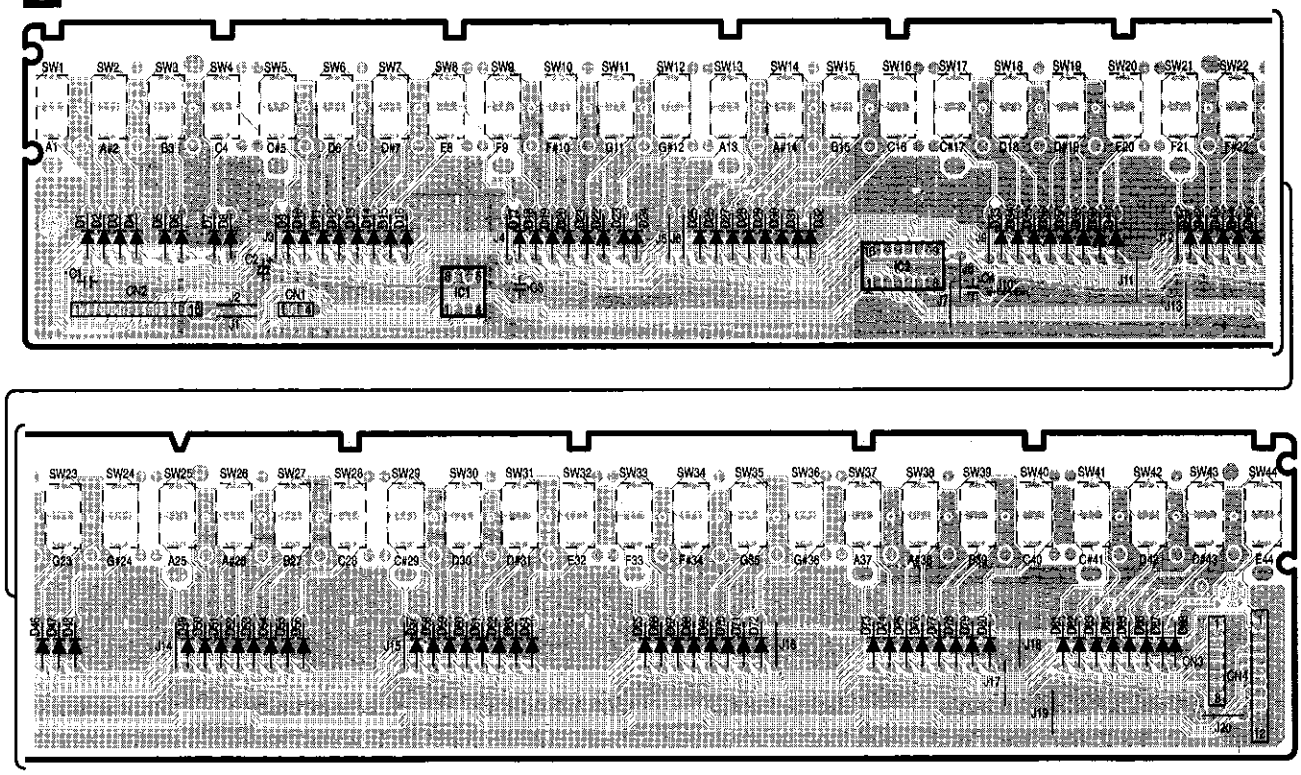
H PKB CIRCUIT



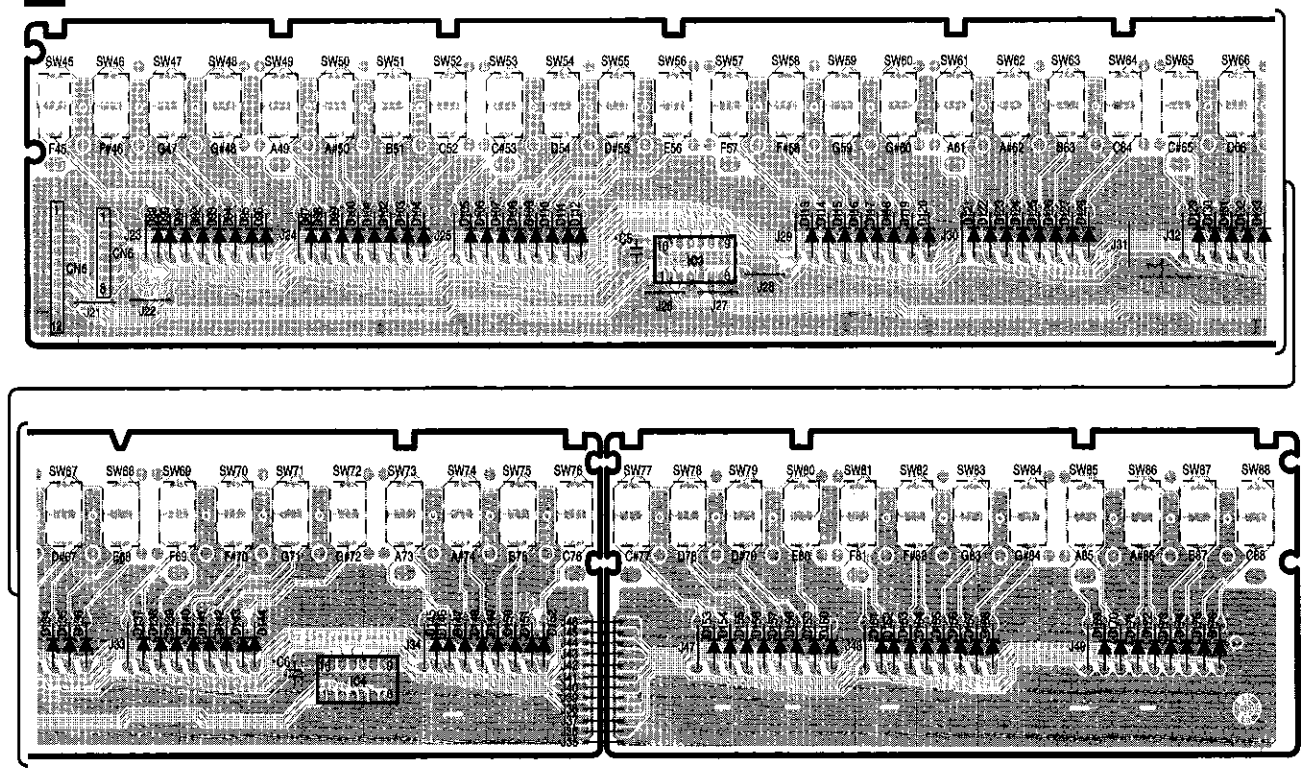
H PKB P.C.B.



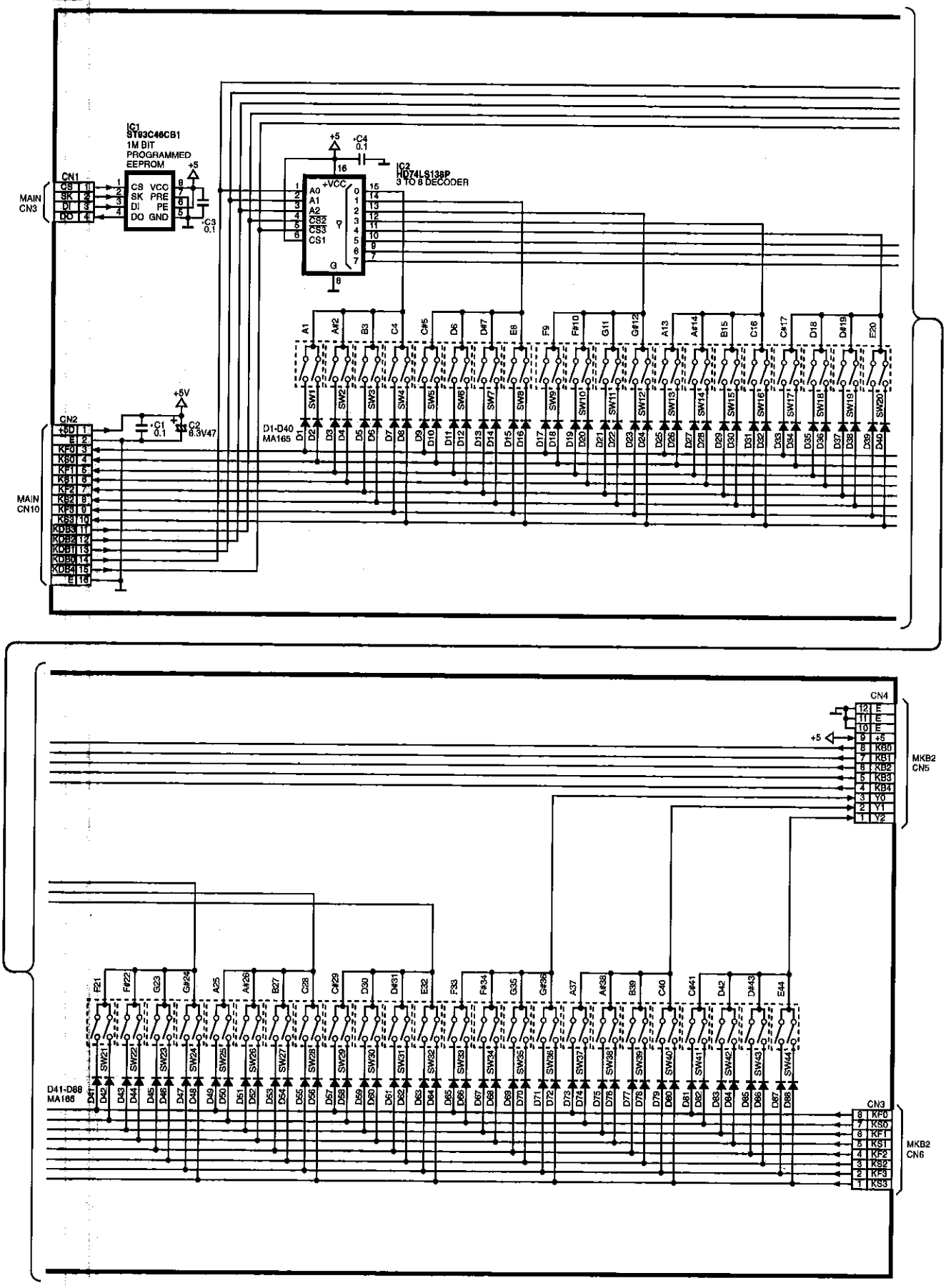
I MKB1 P.C.B.



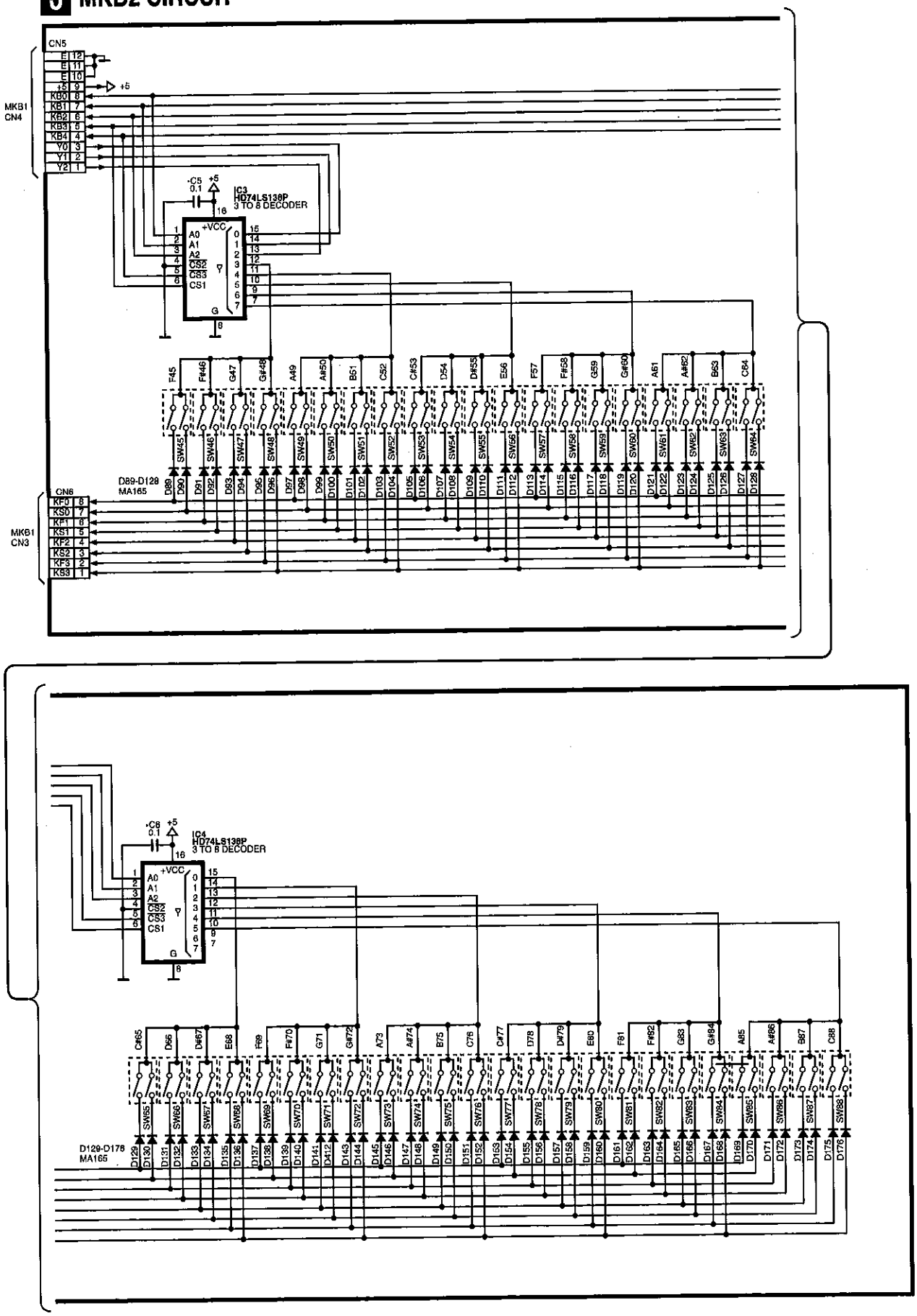
J MKB2 P.C.B.



MKB1 CIRCUIT



J MKB2 CIRCUIT



REPLACEMENT PARTS LIST.....P.C.B. and Wiring Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. The "S" mark is service standard parts and may differ from production parts.
4. ○ mark are new parts.
5. For part No. with area mark, check the area when placing an order.

■ PRINTED CIRCUIT BOARD

	RTL	Area	Part No.	Description	P/S
○	RTL		SXPG231321	MAIN	1
	RTL		SXPG227911	COM	1
○	RTL	[EN, EK, EZ, EW, EF, EA, EP, EH, XL, XR, XP, XW]	SXPG231511A	FJASP INCLUDE ASUB	1
○	RTL	[M, MC, XM]	SXPG231521A	FJASP INCLUDE ASUB	1
○	RTL	[X, XS, XT, XD]	SXPG231531A	FJASP INCLUDE ASUB	1
○	RTL		SXPG231211	HPM	1
○	RTL		SXPG231411A	CPL	1
○	RTL		SXPG231411B	CPR	1
	RTL		SXPG226611A	MKB1	1
	RTL		SXPG226611B	MKB2	1
	RTL		SXPG218211	PKB	1
○			QSLG024AA	LCD	1

MAIN: MAIN CIRCUIT

	Ref. No.	Part No.	Description	P/S
	INTEGRATED CIRCUITS			
	IC1	MN1382QTX	RESET IC	1
○	IC2	QSIGX3C16006	16M BIT MASK ROM	1
	IC3	TC7W14F	INVERTER	1
○	IC5	QSIGX3C16005	16M BIT MASK ROM	1
○	IC6	QSIGDX336AX	8M BIT PROGRAMMED EP ROM	1
○	IC7	TMP94C251F	32 BIT MICROCONTROLLER	1
	IC8	TC7W08F	DUAL 2-INPUT AND GATES	1
	IC9	M5M44265CJ6S	4M BIT DYNAMIC RAM	1
	IC10	TC7S08F	IC, CMOS LOGIC	1
	IC11	PCM1702U	D-A CONVERTER	1
	IC12	TC74HC138AF	3 TO 8 DECODER	1
	IC13	M5256DFP70LL	256K BIT STATIC RAM	1
	IC14	TC7S04F	INVERTER	1
	IC15	D72070GF3BE	8BIT MICROCONTROLLER	1
	IC16	PCM1702U	D-A CONVERTER	1
	IC17	BA10393F	COMPARATOR	1
○	IC18	MN1382KTX	RESET IC	1
	IC100	TC7SH08FU	2 INPUT AND GATE	1
	IC101	M5223FPE1	OPERATIONAL AMPLIFIER	1
	IC102	TC7W74F	INVERTER	1
	IC103	TC203C220004	TONE GENERATOR LSI	1
○	IC104	QSIGX3C32018	32M BIT MASK ROM	1
○	IC105	QSIGX3C32017	32M BIT MASK ROM	1
○	IC106	QSIGX3C32020	32M BIT MASK ROM	1
○	IC107	QSIGX3C32019	32M BIT MASK ROM	1
	IC108	M5M44265CJ6S	4M BIT DYNAMIC RAM	1
	IC109	TMS57070FFT	DIGITAL SIGNAL PROCESSOR	1
	IC110	TC7SH32FU	2 INPUT OR GATE	1
	IC111	M5M34051FP	BUS TRANSCEIVER	1
	IC115	PCM1800E-T1	A/D CONVERTER	1

	Ref. No.	Part No.	Description	P/S
	IC117	T74VHC161FTL	BINARY COUNTER	1
	IC118	T74VHC164FTL	SHIFT REGISTER	1
	IC119	TC7SU04F	INVERTER	1
	IC120	TC7SH08FU	2 INPUT AND GATE	1
	IC121	TC7W74FU	INVERTER	1
	IC122	TC7SH02FU	QUAD 2 INPUT NOR GATE	1
	IC123	T74VHC164FTL	SHIFT REGISTER	1
	IC124	TC7SH32FU	2 INPUT OR GATE	1
	IC125	T7WU04F	TRIPLE INVERTER	1
	IC129	M5218AFP	OPERATIONAL AMPLIFIER	1
	TRANSISTORS			
	Q1	2SD601AQ	TRANSISTOR	1
S	Q2	2SC1815GR	TRANSISTOR	1
	Q3, 5	2SB709AR	TRANSISTOR	2
	Q6	2SD601AQ	TRANSISTOR	1
S	Q7	2SA1015-GR	2SA933STRS (SUB. PART)	1
	Q8	2SD601AQ	TRANSISTOR	1
	Q9	2SB946P	TRANSISTOR	1
	Q10	2SC2240GTPE2	TRANSISTOR	1
	Q11, 12	2SB709AR	TRANSISTOR	2
	Q13	2SD601AQ	TRANSISTOR	1
S	Q100	2SC1815GR	TRANSISTOR	1
	Q101	2SD592ARS	TRANSISTOR	1
	DIODES			
	D1, 2	MA110	DIODE	2
	D3	MA8030L	ZENER, 2.9V	1
	D4	MA110	DIODE	1
	D5	MA151WK	DIODE	1
	D6	MA110	DIODE	1
	D7	MA8056	ZENER, 5.6V	1
	D8	MA8082M	ZENER, 8.2V	1
	D9	MA110	DIODE	1
	D10	MA8051L	ZENER, 5.1V	1
	D11, 12	MA110	DIODE	2
	D14	MA151WK	DIODE	1
	D18, 19	MA738	DIODE	2
⚠	D20	MA2062LF	ZENER, 6.2V	1
	D100	MA8056	ZENER, 5.6V	1
	D101	MA110	DIODE	1
	D102	MA151WK	DIODE	1
	D103, 104	MA110	DIODE	2
	D105	MA151WK	DIODE	1
	D106, 107	MA110	DIODE	2
	OSCILLATORS			
	X1	QSXG1A1000A	10MHz, CRYSTAL OSCILLATOR	1
	X3	QSXG2F2400A	24MHz, CERAMIC OSCILLATOR	1
	X100	QSXG2F0100DA	1MHz, CERAMIC OSCILLATOR	1

Ref. No.	Part No.	Description	P/S
X101	QSXG1I3386A	33.8688MHz, CRYSTAL OSCILLATOR	1
X102	QSXG1A2500A	25MHz, QUARTZ OSCILLATOR	1
COMPONENT COMBINATIONS			
Z1~8	EXBV8V101J	100Ω×4	8
Z17~20	EXBS8V472J	4.7kΩ×4	4
Z21	EXBV8V102J	1KΩ×4	1
Z22~24	EXBV8V470J	47Ω×4	3
Z100~102	EXBS8V471J	470Ω×4	3
Z103, 104	EXBV8V472J	4.7KΩ×4	2
Z105~118	EXBV8V102J	1KΩ×4	14
Z119	EXBV8V101J	100Ω×4	1
Z120	EXBV8V221J	220Ω×4	1
COILS			
L2	SLCG2A121TZ	COIL	1
L3, 4, 9~15	BK2125LM252T	COIL	9
R13, 78	QLQGT1B800MB	80μH	2
R96~99, 142~145, 147~150	BK2125LM252T	COIL	12
R134	LK2125100K-T	COIL	1
IC PROTECTORS			
IP1, 2 ⚠	ICP-N10T104	IC PROTECTOR	2
RESISTORS			
C155, 157	ERJ6GEY0R00V	0Ω	2
L16	ERJ6GEY0R00V	0Ω	1
R1, 2	ERJ6GEYJ471V	470Ω	2
R3~5	ERJ6GEYJ472V	4.7kΩ	3
R6	ERJ6GEYJ101V	100Ω	1
R7	ERJ6GEYJ472V	4.7kΩ	1
R8	ERJ6GEYJ102V	1kΩ	1
R9	ERJ6GEYJ104V	100kΩ	1
R10	ERJ6GEYJ103V	10kΩ	1
R11	ERJ6GEYJ104V	100kΩ	1
R12	ERJ6GEYJ101V	100Ω	1
R14	ERJ6GEYJ104V	100kΩ	1
R15	ERJ6GEYJ101V	100Ω	1
R16	ERJ6GEYJ220V	22Ω	1
R17, 18	ERJ6GEYJ101V	100Ω	2
R19	ERJ6GEYJ470V	47Ω	1
R20	ERJ6GEYJ221V	220Ω	1
R21	ERJ6GEYJ101V	100Ω	1
R22	ERJ6GEYJ104V	100kΩ	1
R23	ERJ6GEYJ102V	1kΩ	1
R24	ERJ6GEYJ222V	2.2kΩ	1
R25	ERJ6GEYJ102V	1kΩ	1
R26, 29, 30	ERJ6GEYJ472V	4.7kΩ	3
R31	ERJ6GEY0R00V	0Ω	1
R32	ERJ6GEYJ104V	100kΩ	1
R33~35	ERJ6GEYJ102V	1kΩ	3
R36, 37	ERJ6GEYJ472V	4.7kΩ	2
R38	ERJ6GEYJ101V	100Ω	1
R39~41	ERJ6GEYJ103V	10kΩ	3
R42	ERJ6GEYJ151V	150Ω	1
R43	ERJ6GEYJ103V	10kΩ	1
R45	ERJ6GEYJ681V	680Ω	1
R47~49	ERJ6GEY0R00V	0Ω	3
R50	ERJ6GEYJ471V	470Ω	1
R51	ERJ6GEYJ101V	100Ω	1
R52, 53	ERJ6GEYJ472V	4.7kΩ	2
R54	ERJ6GEYJ220V	22Ω	1

Ref. No.	Part No.	Description	P/S
R55, 56	ERJ6GEYJ151V	150Ω	2
R57	ERJ6GEYJ102V	1kΩ	1
R58	ERJ6GEYJ105V	1MΩ	1
R59	ERJ6GEYJ682V	6.8kΩ	1
R60	ERJ6GEYJ102V	1kΩ	1
R61, 62	ERJ6GEYJ101V	100Ω	2
R63	ERJ6GEYJ470V	47Ω	1
R64	ERJ6GEYJ470V	47Ω	1
R65~67	ERJ6GEYJ222V	2.2kΩ	3
R68	ERJ6GEYJ102V	1kΩ	1
R69	ERJ6GEYJ222V	2.2kΩ	1
R70	ERJ6GEYJ101V	100Ω	1
R71	ERJ6GEYJ103V	10kΩ	1
R72	ERJ6GEYJ332V	3.3kΩ	1
R73, 74	ERJ6GEYJ101V	100Ω	2
R75	ERJ6GEYJ154V	150kΩ	1
R77	ERJ6GEYJ102V	1kΩ	1
R78	ERJ6GEY0R00V	0Ω	1
R79	ERJ6GEYJ334V	330kΩ	1
R80	ERJ6GEYJ471V	470Ω	1
R81	ERJ6GEYJ333V	33kΩ	1
R82	ERJ6GEYJ472V	4.7kΩ	1
R83	ERJ6GEYJ470V	47Ω	1
R84	ERJ6GEYJ681V	680Ω	1
R85	ERJ6GEYJ151V	150Ω	1
R86	ERJ6GEYJ681V	680Ω	1
R87	ERJ6GEYJ151V	150Ω	1
R88, 90	ERJ6GEYJ472V	4.7kΩ	2
R91, 92	ERJ6GEYJ102V	1kΩ	2
R93, 94	ERJ6GEYJ222V	2.2kΩ	2
R95	ERJ6GEYJ682V	6.8kΩ	1
R100	ERJ6GEYJ471V	470Ω	1
R101, 102	ERJ6GEYJ102V	1kΩ	2
R103	ERJ6GEYJ104V	100kΩ	1
R104~106	ERJ6GEYJ472V	4.7kΩ	3
R107	ERJ6GEYJ471V	470Ω	1
R108	ERJ6GEYJ472V	4.7kΩ	1
R109	ERJ6GEYJ221V	220Ω	1
R110	ERJ6GEYJ102V	1kΩ	1
R111	ERJ6GEYJ105V	1MΩ	1
R112	ERJ6GEYJ102V	1kΩ	1
R113	ERJ6GEYJ472V	4.7kΩ	1
R114	ERJ6GEYJ681V	680Ω	1
R115, 116	ERJ6GEYJ101V	100Ω	2
R117, 118	ERJ6GEYJ331V	330Ω	2
R119	ERJ6GEYJ102V	1kΩ	1
R120~122	ERJ6GEYJ101V	100Ω	3
R123~127	ERJ6GEYJ102V	1kΩ	5
R126, 127	ERJ6GEYJ101V	100Ω	2
R128	ERJ6GEYJ105V	1MΩ	1
R129	ERJ6GEYJ472V	4.7kΩ	1
R130	ERJ6GEYJ102V	1kΩ	1
R131, 132	ERJ6GEYJ103V	10kΩ	2
R133	ERJ6GEYJ101V	100Ω	1
R135	ERJ6GEYJ472V	4.7kΩ	1
R136	ERJ6GEYJ102V	1kΩ	1
R137	ERJ6GEYJ472V	4.7kΩ	1
R138, 139	ERJ6GEYJ221V	220Ω	2
R141	ERJ6GEYJ471V	470Ω	1
R146	ERJ6GEYJ101V	100Ω	1
R151	ERJ6GEYJ471V	470Ω	1
R153, 154	ERJ6GEYJ331V	330Ω	2
R155, 156	ERJ6GEYJ101V	100Ω	2
R157	ERD25V0R00	0Ω, 1/4W	1
R158	ERJ6GEYJ101V	100Ω	1
R159	ERJ6GEY0R00V	0Ω	1
R160	ERJ6GEYJ224V	220kΩ	1
R161	ERJ6GEYJ104V	100kΩ	1

Ref. No.	Part No.	Description	P/S
R162	ERJ6GEYJ331V	330Ω	1
R163	ERJ6GEYJ151V	150Ω	1
R167	ERDS2TJ1221	220Ω	1
R171	ERJ6GEY0R00V	0Ω	1
R172	ERJ6GEYJ104V	100kΩ	1
R173, 174	ERJ6GEYJ103V	10kΩ	2
R175, 176	ERJ6GEY0R00V	0Ω	2
R178	ERJ6GEYJ104V	100kΩ	1
R179	ERJ6GEYJ473V	47kΩ	1
CAPACITORS			
C1, 2	ECUV1H101JG	100pF	2
C3, 4	ECUV1H104ZFX	0.1 μF	2
C5	ECUV1H103KBG	0.01 μF	1
C6	ECUV1H104ZFX	0.1 μF	1
C7	ECUV1H332KB	0.0033 μF	1
C8	ECUV1H104ZFX	0.1 μF	1
C9	ECUV1C224KBX	0.22 μF	1
C10~16	ECUV1H104ZFX	0.1 μF	7
C17	ECUV1H100DCN	10pF	1
C18	ECEA1CKA100	10 μF, 16V	1
C20	ECUV1H104ZFX	0.1 μF	1
C21	ECUV1H103KBG	0.01 μF	1
C22~30	ECUV1H104ZFX	0.1 μF	9
C31	ECUV1H101JG	100pF	1
C32	ECUV1H104ZFX	0.1 μF	1
C33	ECEA1CKA100	10 μF, 16V	1
C34, 35	ECUV1H104ZFX	0.1 μF	2
C36	ECUV1H223KBX	0.022 μF	1
C37	ECUV1H182JX	0.0018 μF	1
C38, 39	ECUV1H104ZFX	0.1 μF	2
C40	ECUV1H472KBG	0.0047 μF	1
C41	ECUV1H333KBX	0.033 μF	1
C42	ECUV1H104ZFX	0.1 μF	1
C43, 44	ECUV1H100DCN	10pF	2
C45	ECUV1H104ZFX	0.1 μF	1
C46	EECS5R5V105	1F, 5.5V, MEMORY BACK-UP	1
C47	ECA0JM221	220 μF, 6.3V	1
C48	ECEA1CKA100	10 μF, 16V	1
C49	ECUV1H104ZFX	0.1 μF	1
C50	ECA1JM220B	22 μF, 63V	1
C51	ECUV1H104ZFX	0.1 μF	1
C52	ECEA1CKN100	10 μF, 16V	1
C53	ECUV1H104ZFX	0.1 μF	1
C54	ECEA1CKA100	10 μF, 16V	1
C55	ECUV1H222KX	0.0022 μF	1
C56	ECUV1H101JG	100pF	1
C57	ECUV1H682KBG	0.0068 μF	1
C58	ECUV1H104ZFX	0.1 μF	1
C60	ECUV1H101JG	100pF	1
C62	ECUV1H104ZFX	0.1 μF	1
C63	ECA0JM102	1000 μF, 6.3V	1
C65~67	ECUV1H104ZFX	0.1 μF	3
C68	ECUV1H101JG	100pF	1
C70~72	ECUV1H104ZFX	0.1 μF	3
C73	ECUV1H101JG	100pF	1
C74	ECUV1H333KBX	0.033 μF	1
C75, 76	ECUV1H104ZFX	0.1 μF	2
C77	ECUV1H101JG	100pF	1
C78	ECUV1H104ZFX	0.1 μF	1
C79	ECUV1H101JG	100pF	1
C80	EECS5R5V105	1F, 5.5V, MEMORY BACK-UP	1
C83	ECEA0JKA101	100 μF, 6.3V	1
C84, 85	ECUV1H104ZFX	0.1 μF	2
C86	ECEA0JKA101	100 μF, 6.3V	1
C87~89	ECUV1H104ZFX	0.1 μF	3
C93	ECUV1H471JG	470pF	1
C96	ECCR1H221J	220pF	1
C97	ECCR1H331J	330pF	1
C100~104	ECUV1H101JG	100pF	5
C105	ECUV1H060DCN	6pF	1
C106	ECUV1H104ZFX	0.1 μF	1
C107	ECUV1H030CCN	3pF	1
C108~112	ECUV1H104ZFX	0.1 μF	5
C113	ECEA0JKA470	47 μF, 6.3V	1
C114~122	ECUV1H104ZFX	0.1 μF	9
C125	ECUV1H103KBG	0.01 μF	1
C126	ECUV1C224KBX	0.22 μF	1
C127	ECUV1H104ZFX	0.1 μF	1
C130, 131	ECUV1H100DCN	10pF	2
C132~136	ECUV1H104ZFX	0.1 μF	5
C137, 138	ECUV1H471JG	470pF	2
C139, 140, 142	ECUV1H104ZFX	0.1 μF	3
C144	ECRF1H104ZF	0.1 μF	1
C145	ECA1CM101	100 μF, 16V	1
C146	ECUV1H104ZFX	0.1 μF	1
C149	ECUV1H101JG	100pF	1
C154	ECUV1H104ZFX	0.1 μF	1
C156	ECUV1H101JG	100pF	1
C162, 163	ECUV1H471JG	470pF	2
C164, 165	ECEA1CKN100	10 μF, 16V	2
C166	ECEA1CKA100	10 μF, 16V	1
C167	ECUV1H104ZFX	0.1 μF	1

COM: COMPUTER CIRCUIT

Ref. No.	Part No.	Description	P/S
JACK			
JK1	QJSG017AA	COMPUTER	1
SWITCH			
S1	QSSGT011AA	SLIDE SWITCH	1

FJASP: FILTER, JACK & SPEAKER CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC1~8	M5218AL	OPERATIONAL AMPLIFIER	8
IC9	QCPL-260L	PHOTO COUPLER	1
IC10	M5218AL	OPERATIONAL AMPLIFIER	1
IC11	SVIGM5238L	OPERATIONAL AMPLIFIER	1
TRANSISTORS			
Q1	2SD592ARS	TRANSISTOR	1
Q2	2SB621ARS	TRANSISTOR	1
Q3	2SD592ARS	TRANSISTOR	1
Q4	2SB621ARS	TRANSISTOR	1
S Q5	2SC1815GR	TRANSISTOR	1
S Q6	2SA1015-GR	2SA933STRS (SUB. PART)	1
Q7	2SD2374A-P	TRANSISTOR	1
Q8	2SB1548A-P	TRANSISTOR	1
S Q9	2SA1015-GR	2SA933STRS (SUB. PART)	1
S Q10	2SC1815GR	TRANSISTOR	1
S Q11	2SA1015-GR	2SA933STRS (SUB. PART)	1

	Ref. No.		Part No.	Description	P/S
S	Q13		2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q14		2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q15~17		2SC1815GR	TRANSISTOR	3
S	Q18		2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q19~21		2SC1815GR	TRANSISTOR	3
	Q22~24	⚠	FX30KMJ-3	FET	3
	Q25	⚠	FS30KMJ-3	FET	1
S	Q26, 27		2SC1815GR	TRANSISTOR	2
	DIODES				
	D1~3		SVDGERA1502	RECTIFIER	3
	D4~11	⚠	SVDS3V20	RECTIFIER	8
	D12, 13		MA4160	ZENER, 16.0V	2
	D14, 15		MA4180	ZENER, 18V	2
	D16		MA165	DIODE	1
	D17, 18		EK04	DIODE	2
	D19, 22, 23		MA165	DIODE	3
	D24, 25		MA4240M	DIODE	2
	D26, 27		MA165	DIODE	2
	COILS				
	L1		QLQGT1B800MA	80 μH	1
○	L2~4		QLQGT3T131LA	130 μH×3	3
	L5~8		QLBG005A	COIL	4
○	L9~11		QLQGT3T131LA	130 μH×3	3
	L12	⚠	QLQGT2T100LA	10 μH×2	1
○	L13, 14		QLQGT1D600LA	60 μH	2
	JACKS				
	JK1		QJJG003AA	LINE OUT L	1
	JK2		QJJG003AA	LINE OUT R/R+L	1
	JK3		QJJG003AA	AUX IN L	1
	JK4		QJJG003AA	AUX IN R/R+L	1
	JK5		QJSG007AA	PEDAL IN	1
	JK7		QJSG016AA	MIDI OUT	1
	JK8		QJSG016AA	MIDI IN	1
	JK9	⚠	SJVD0203B	AC INLET	1
	SWITCH				
	S1	⚠	SSRG100A	VOLTAGE SELECTOR, [X, XS, XD, XT]	1
	IC PROTECTORS				
	IP1~4	⚠	ICP-N75T104	IC PROTECTOR	4
	IP5, 6	⚠	ICP-N10T104	IC PROTECTOR	2
	WIRES				
	W1~3		QEXGRA01005A	WIRE	3
	FUSES				
	F1	⚠	XBA1C63NU100	6.3A, 125V, [M, MC, XM]	1
	F1	⚠	XBA2C31TB0	T3.15A, 250V, [X, XS, XD, XT]	1
	F2	⚠	XBA2C20TB0	T2A, 250V, [X, XS, XD, XT]	1
	F3	⚠	XBA2C20TB0	T2A, 250V, [EN, EK, EZ, EW, EF, EA, EH, EP, XP, XL, XR, XW, X, XS, XD, XT]	1
	VARIABLE RESISTOR				
	VR1		QRNG0681C102	1kΩ	1

Ref. No.		Part No.	Description	P/S
RESISTORS				
R3		ERDS2TJ152	1.5kΩ	1
R4		ERDS2TJ332	3.3kΩ	1
R5		ERDS2TJ103	10kΩ	1
R6, 7		ERDS2TJ334	330kΩ	2
R8		ERDS2TJ103	10kΩ	1
R9	⚠	ERD2FCVJ4R7	4.7Ω, 1/4W, FUSE TYPE	1
R10		ERDS2TJ334	330kΩ	1
R11, 12		ERDS2TJ681	680Ω	2
R13	⚠	ERD2FCVJ4R7	4.7Ω, 1/4W, FUSE TYPE	1
R14		ERDS2TJ334	330kΩ	1
R15		ERDS2TJ222	2.2kΩ	1
R16		ERDS2TJ220	22Ω	1
R17		ERDS2TJ222	2.2kΩ	1
R18		ERDS2TJ220	22Ω	1
R19, 20		ERDS2TJ563	56kΩ	2
R21, 22	⚠	ERD2FCVJ6R8	6.8Ω, 1/4W, FUSE TYPE	2
R23, 24		ERDS2TJ332	3.3kΩ	2
R25, 26	⚠	ERD2FCVG220	22Ω, 1/4W, FUSE TYPE	2
R27, 28		ERDS2TJ153	15kΩ	2
R29		ERDS2TJ103	10kΩ	1
R30, 31		ERDS2TJ682	6.8kΩ	2
R32		ERDS2TJ103	10kΩ	1
R33, 34		ERDS2TJ682	6.8kΩ	2
R35, 36		ERDS2TJ223	22kΩ	2
R37, 38		ERDS2TJ682	6.8kΩ	2
R39		ERDS2TJ103	10kΩ	1
R40		ERDS2TJ473	47kΩ	1
R41		ERDS2TJ152	1.5kΩ	1
R42		ERDS2TJ182	1.8kΩ	1
R43		ERDS2TJ152	1.5kΩ	1
R44		ERDS2TJ102	1kΩ	1
R45		ERDS2TJ103	10kΩ	1
R46		ERDS2TJ334	330kΩ	1
R47		ERDS2TJ332	3.3kΩ	1
R48		ERDS2TJ104	100kΩ	1
R49		ERDS2TJ224	220kΩ	1
R50		ERDS2TJ394	390kΩ	1
R51		ERDS2TJ224	220kΩ	1
R52		ERDS2TJ274	270kΩ	1
R53		ERDS2TJ102	1kΩ	1
R54		ERDS2TJ182	1.8kΩ	1
R55, 56		ERDS2TJ182	1.8kΩ	2
R57		ERDS2TJ274	270kΩ	1
R58		ERDS2TJ224	220kΩ	1
R59		ERDS2TJ224	220kΩ	1
R60		ERDS2TJ274	270kΩ	1
R61		ERDS2TJ472	4.7kΩ	1
R62, 63		ERDS2TJ222	2.2kΩ	2
R64		ERDS2TJ472	4.7kΩ	1
R65		ERDS2TJ184	180kΩ	1
R66, 67		ERDS2TJ224	220kΩ	2
R68		ERDS2TJ184	180kΩ	1
R69		ERDS2TJ680	68Ω	1
R70, 71		ERDS2TJ221	220Ω	2
R73		ERDS2TJ151	150Ω	1
R74~76		ERDS2TJ471	470Ω	3
R77, 78		ERDS2TJ223	22kΩ	2
R79		ERDS2TJ473	47kΩ	1
R80, 81		ERDS2TJ154	150kΩ	2
R82		ERDS2TJ103	10kΩ	1
R83		ERDS2TJ332	3.3kΩ	1
R84, 85		ERDS2TJ222	2.2kΩ	2
R86		ERDS2TJ472	4.7kΩ	1
R87		ERDS2TJ331	330Ω	1
R88		ERDS2TJ103	10kΩ	1
R90		ERDS2TJ393	39kΩ	1

	Ref. No.		Part No.	Description	P/S
	R91		ERDS2TJ472	4.7kΩ	1
	R92, 93		ERDS2TJ104	100kΩ	2
	R94		ERDS2TJ105	1MΩ	1
	R95		ERDS2TJ154	150kΩ	1
	R96		ERDS2TJ472	4.7kΩ	1
	R97		ERDS2TJ105	1MΩ	1
	R98		ERDS2TJ472	4.7kΩ	1
	R99		ERDS2TJ154	150kΩ	1
	R100		ERDS2TJ152	1.5kΩ	1
	R101		ERDS2TJ222	2.2kΩ	1
	R102		ERDS2TJ333	33kΩ	1
	R103		ERDS2TJ472	4.7kΩ	1
	R104		ERDS2TJ223	22kΩ	1
	R105～108		ERDS2TJ104	100kΩ	4
	R109		ERDS2TJ333	33kΩ	1
	R110		ERDS2TJ472	4.7kΩ	1
	R111		ERDS2TJ223	22kΩ	1
	R112	⚠	ERD2FCVG100	10Ω, 1/4W, FUSE TYPE	1
	R113	⚠	ERF5TJ100	10Ω, 5W, FLAME-PROOF	1
	R114	⚠	ERD2FCVG100	10Ω, 1/4W, FUSE TYPE	1
	R115	⚠	ERF5TJ100	10Ω, 5W, FLAME-PROOF	1
	R116, 117	⚠	ERF2EXKR10V	0.1Ω, 2W, FLAME-PROOF	2
	R118, 119		ERDS2TJ102	1kΩ	2
	R120	⚠	ERD2FCVG4R7	4.7Ω, 1/4W, FUSE TYPE	1
	CAPACITORS				
	C1	⚠	ECQE1A104M6	0.1μF, 125V	1
	C2～5		ECBA1C222MR	0.0022μF	4
	C6		ECCR1H100D	10pF	1
	C7, 8		ECRF1H104ZF	0.1μF	2
	C9		ECCR1H100D	10pF	1
○	C10, 11		ECA1JM222E	2200μF, 63V	2
	C12		QCBG1H104ZFA	0.1μF	1
	C13, 14		ECEA1HKN010	1μF, 50V	2
	C15, 16		ECQV1J105JM	1μF	2
	C17, 18		ECEA1HKA010	1μF, 50V	2
	C19, 20		ECCR1H221J	220pF	2
	C21, 22		ECA1CM101	100μF, 16V	2
	C23, 24		ECQG1H682KZ	0.0068μF	2
	C25		ECEA1CKN100	10μF, 16V	1
	C26		ECQV1H224JM	0.22μF	1
	C27		ECEA1CKN100	10μF, 16V	1
	C28		ECQV1H474JM	0.47μF	1
	C29		ECQB1H233JF	0.022μF	1
	C30		ECQG1H152KZ	0.0015μF	1
	C31		ECQB1H223JF	0.022μF	1
	C32		ECQB1H103JF	0.01μF	1
	C33		ECQV1H474JM	0.47μF	1
	C34		ECQB1H153JF	0.015μF	1
	C35		ECQV1H224JM	0.22μF	1
	C36		ECQB1H153JF	0.015μF	1
	C37		ECEA1CKA100	10μF, 16V	1
	C38		ECA1CM101	100μF, 16V	1
	C39		ECQB1H103JF	0.01μF	1
	C40		ECQG1H472KZ	0.0047μF	1
	C41		ECQG1H152KZ	0.0015μF	1
	C42		ECQG1H472KZ	0.0047μF	1
	C43		ECQG1H152KZ	0.0015μF	1
	C44, 45		ECQG1H332KZ	0.0033μF	2
	C46		ECQG1H152KZ	0.0015μF	1
	C47		ECQG1H102KZ	0.001μF	1
	C48, 49		ECQG1H222KZ	0.0022μF	2
	C50		ECQG1H102KZ	0.001μF	1
	C51		ECRF1H104ZF	0.1μF	1
	C52		ECQB1H473JF	0.047μF	1
	C54		ECCR1H221J	220pF	1
	C55, 56		ECCR1H151J	150pF	2

	Ref. No.		Part No.	Description	P/S
	C57, 58		ECQV1H334JM	0.33μF	2
	C59		ECEA1HKN010	1μF, 50V	1
	C60, 61		ECCR1H471J	470pF	2
	C62		ECQG1H472KZ	0.0047μF	1
	C63, 64		ECQG1H222KZ	0.0022μF	2
	C65	⚠	ECKCVA1472MF	4700pF	1
○	C66, 67		ECA1JTE101B	100μF, 63V	2
	C68	⚠	ECQU2A104MN	0.1μF, 250V	1
	C69～72		ECQV1J105JM	1μF	4
○	C73		ECA1JM222E	2200μF, 63V	1
	C74		ECEA50Y1R5K	1.5μF, 50V	1
○	C75		ECA1JM222E	2200μF, 63V	1
	C76		ECEA50Y1R5K	1.5μF, 50V	1
○	C77, 78		ECA1JM222E	2200μF, 63V	2

ASUB: AMP SUB CIRCUIT

	Ref. No.	Part No.	Description	P/S
	TRANSISTORS			
S	Q101	2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q102	2SC1815GR	TRANSISTOR	1
S	Q103, 104	2SA1015-GR	2SA933STRS (SUB. PART)	2
	Q105	2SA970GTPE2	TRANSISTOR	1
	Q106	2SC2240GTPE2	TRANSISTOR	1
S	Q107	2SC1815GR	TRANSISTOR	1
S	Q108	2SA1015-GR	2SA933STRS (SUB. PART)	1
	Q109	2SA1285FTA	TRANSISTOR	1
	Q110	2SC3245FTA	TRANSISTOR	1
S	Q111	2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q112	2SC1815GR	TRANSISTOR	1
S	Q113, 114	2SA1015-GR	2SA933STRS (SUB. PART)	2
	Q115	2SA970GTPE2	TRANSISTOR	1
	Q116	2SC2240GTPE2	TRANSISTOR	1
S	Q117	2SC1815GR	TRANSISTOR	1
S	Q118	2SA1015-GR	2SA933STRS (SUB. PART)	1
	Q119	2SA1285FTA	TRANSISTOR	1
	Q120	2SC3245FTA	TRANSISTOR	1
S	Q121	2SC1815GR	TRANSISTOR	1
S	Q122	2SA1015-GR	2SA933STRS (SUB. PART)	1
S	Q123	2SC1815GR	TRANSISTOR	1
S	Q124	2SA1015-GR	2SA933STRS (SUB. PART)	1
	DIODES			
	D101, 102, 107, 108	MA165	DIODE	4
	D109	EK04	DIODE	1
	RESISTORS			
	R101 ⚠	ERD2FCVG221T	220Ω, 1/4W, FUSE TYPE	1
	R102, 103	ERDS2TJ152	1.5kΩ	2
	R104	ERDS2TJ472	4.7kΩ	1
	R105, 106 ⚠	ERD2FCVG221T	220Ω, 1/4W, FUSE TYPE	2
	R107, 108 ⚠	ERD2FCVG471T	470Ω, 1/4W, FUSE TYPE	2
	R109, 110	ERDS2TJ103	10kΩ	2
	R113 ⚠	ERD2FCVG221T	220Ω, 1/4W, FUSE TYPE	1
	R114, 115	ERDS2TJ152	1.5kΩ	2
	R116	ERDS2TJ472	4.7kΩ	1
	R117, 118 ⚠	ERD2FCVG221T	220Ω, 1/4W, FUSE TYPE	2
	R119, 120 ⚠	ERD2FCVG471T	470Ω, 1/4W, FUSE TYPE	2
	R121, 122	ERDS2TJ103	10kΩ	2
	R123, 124 ⚠	ERD2FCVG101T	100Ω, 1/4W, FUSE TYPE	2

Ref. No.	Part No.	Description	P/S
CAPACITORS			
C101	ECBA1H151KB	150pF	1
C102, 103	ECBA1H681KB5	680pF	2
C104	ECBA1H151KB	150pF	1
C105, 106	ECBA1H681KB5	680pF	2

HPM: HEAD PHONE & MIC. CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUIT			
IC1	M5218AL	OPERATIONAL AMPLIFIER	1
TRANSISTOR			
S Q1	2SC1815GR	TRANSISTOR	1
DIODES			
D1	MA165	DIODE	1
D2	SEL4214RLC05	LED, POWER INDICATOR	1
COILS			
○ L1, 2	QLQGT3T131LA	130 μH×3	2
JACKS			
JK1	QJJG010AA	HEADPHONE 1	1
JK2	QJJG010AA	HEADPHONE 2	1
JK3	QJJG011AA	MIC	1
VARIABLE RESISTOR			
VR1	QRVG09A02B54	50K, MIC VOLUME	1
RESISTORS			
R1~4 ⚠	ERG1SJ470	47Ω, 1W, FLAME-PROOF	4
R5	ERDS2TJ104	100kΩ	1
R6	ERDS2TJ472	4.7kΩ	1
R7	ERDS2TJ222	2.2kΩ	1
R8	ERDS2TJ104	100kΩ	1
R9	ERDS2TJ223	22kΩ	1
R10	ERDS2TJ683	68kΩ	1
R11	ERDS2TJ222	2.2kΩ	1
R12	ERDS2TJ152	1.5kΩ	1
R13	ERDS2TJ222	2.2kΩ	1
CAPACITORS			
C1, 2	QCBG1H473ZFA	0.047 μF	2
C3	QCBG1H104ZFA	0.1 μF	1
C4	ECEA1HKN010	1 μF, 50V	1
C5	ECBT1H470J5	47pF	1
C6	QCBG1H104ZFA	0.1 μF	1
C7	ECEA1HKN010	1 μF, 50V	1
C8	ECEA0JKA470	47 μF, 6.3V	1
C9	ECBA1C682MR5	0.0068 μF	1
C10	QCBG1H104ZFA	0.1 μF	1
C11	ECEA1HKN010	1 μF, 50V	1

CPL: CONTROL PANEL LEFT CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC1	M37471M2196S	8 BIT MICROCOMPUTER	1
IC2, 3	HD74LS07P	HEX BUFFERS	2
TRANSISTORS			
Q1~5	2SA830SB	TRANSISTOR	5
DIODES			
D51~69	MA165	DIODE	19
D120, 121	LN282R	LED (RED)	2
D122	LN382G	LED (GREEN)	1
D123~125	LN282R	LED (RED)	3
D126	LN382G	LED (GREEN)	1
D127~132	LN282R	LED (RED)	6
OSCILLATOR			
X1	EF0EC4004A3	4MHz, CERAMIC OSCILLATOR	1
SWITCHES			
S51~69	EVQ21507K	PUSH SWITCH	19
VARIABLE RESISTOR			
VR2	QRVG25P01B53	5KΩ B, MAIN VOLUME	1
RESISTORS			
R1	ERDS2TJ471	470Ω	1
R2, 3	ERDS2TJ221	220Ω	2
R4	ERDS2TJ471	470Ω	1
R5	ERDS2T0	0Ω, 1/4W	1
R6	ERDS2TJ101	100Ω	1
R7	ERDS2TJ103	10kΩ	1
R8	ERDS2TJ333	33kΩ	1
R9	ERDS2TJ103	10kΩ	1
R10	ERDS2T0	0Ω, 1/4W	1
R11~15, 17~24	ERDS2TJ103	10kΩ	13
R31~39	ERDS2TJ101	100Ω	9
R40	ERDS2TJ104	100kΩ	1
CAPACITORS			
C1, 2	ECEA0JKA101	100 μF, 6.3V	2
C3	QCBG1H104ZFA	0.1 μF	1
C4	ECBA1E223ZF	0.022 μF	1
C5~7	QCBG1H104ZFA	0.1 μF	3

CPR: CONTROL PANEL RIGHT CIRCUIT

Ref. No.	Part No.	Description	P/S
DIODES			
D1~27	MA165	DIODE	27
D101~115	LN282R	LED (RED)	15
D116	LN382G	LED (GREEN)	1
D117	LN282R	LED (RED)	1
D118	LN382G	LED (GREEN)	1
D119	LN282R	LED (RED)	1

Ref. No.	Part No.	Description	P/S
SWITCHES			
S1~27	EVQ21507K	PUSH SWITCH	27
VARIABLE RESISTOR			
VR1	QRVG25N01B53	5KΩ B, SEQUENCER VOLUME	1
CAPACITOR			
C8	QCBG1H104ZFA	0.1 μF	1

MKB1: MANUAL KEYBOARD 1 CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC1	ST93C46CB1	1M BIT PROGRAMMED EEPROM	1
IC2	HD74LS138P	3 TO 8 DECODER	1
DIODES			
D1~88	MA165	DIODE	88
CAPACITORS			
C1	ECRF1H104ZF	0.1 μF	1
C2	ECEA0JKA470	47 μF, 6.3V	1
C3, 4	ECRF1H104ZF	0.1 μF	2

MKB2: MANUAL KEYBOARD 2 CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC3, 4	HD74LS138P	3 TO 8 DECODER	2
DIODES			
D89~176	MA165	DIODE	88
CAPACITORS			
C5, 6	ECRF1H104ZF	0.1 μF	2

PKB: PEDAL KEYBOARD CIRCUIT

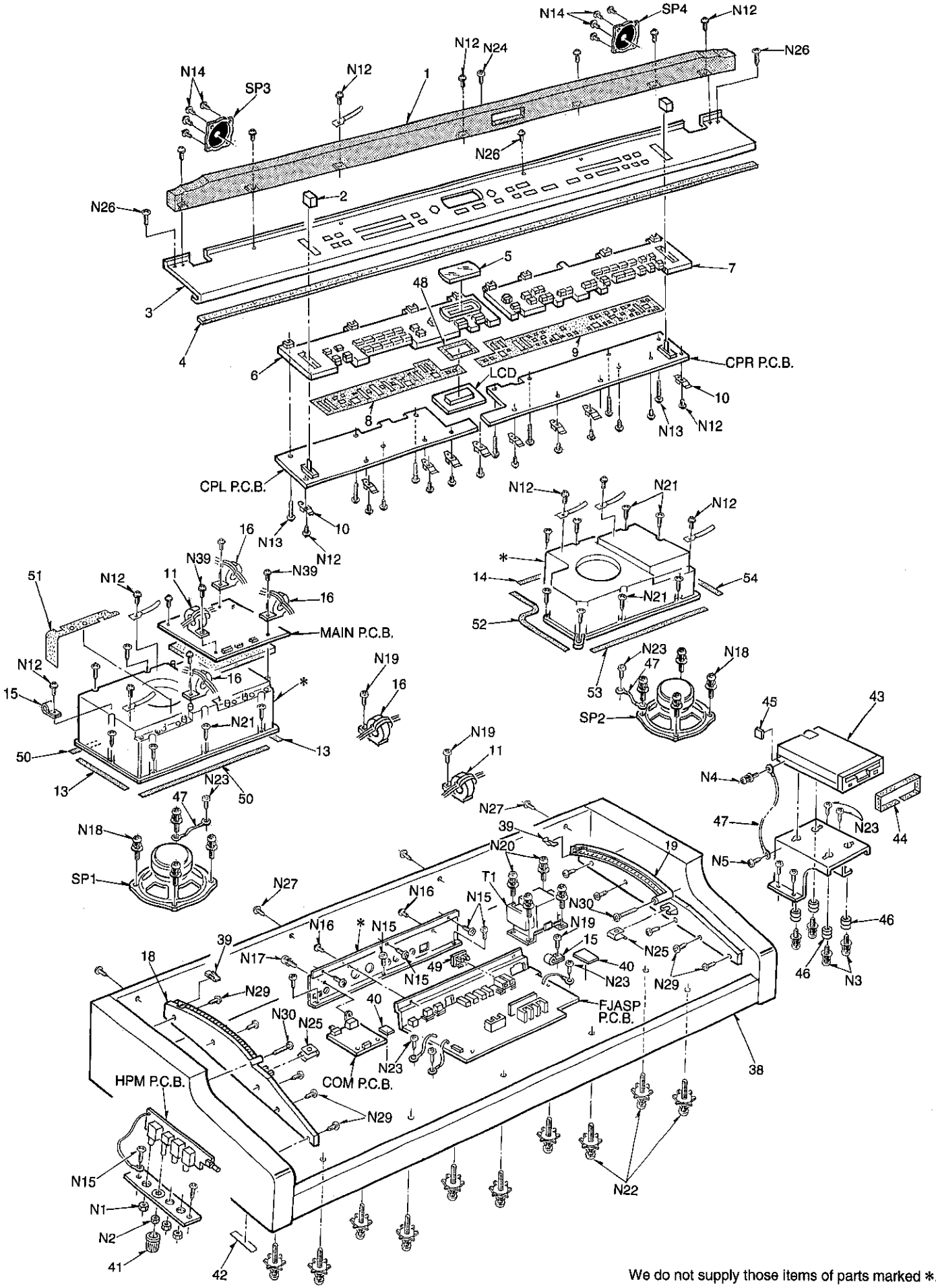
Ref. No.	Part No.	Description	P/S
TRANSISTORS			
S Q1, 2	2SC1815GR	TRANSISTOR	2
S Q3	2SA1015-GR	2SA933STRS (SUB. PART)	1
DIODE			
D1	GP2S24BC	PHOTO INTERRUPTER	1

Ref. No.	Part No.	Description	P/S
SWITCHES			
S1, 2	QSTGT001AA	LEVER SWITCH	2
VARIABLE RESISTOR			
VR1	EVND8AA03B52	500Ω	1
RESISTORS			
JR1~3	ERDS2T0	0Ω, 1/4W	3
R1	ERDS2TJ181	180Ω	1
R2	ERDS2TJ224	220kΩ	1
R3	ERDS2TJ333	33kΩ	1
R4	ERDS2TJ683	68kΩ	1
R5	ERDS2TJ124	120kΩ	1
R6	ERDS2TJ224	220kΩ	1
R7	ERDS2TJ124	120kΩ	1
R8~10	ERDS2TJ472	4.7kΩ	3
R11	ERDS2T0	0Ω, 1/4W	1
R12	ERDS2TJ391	390Ω	1
R13	ERTD2ZGK102	1kΩ	1
R14	ERDS2TJ222	2.2kΩ	1
CAPACITORS			
C1, 2	ECRF1H104ZF	0.1 μF	2
C3	ECQB1H153JF	0.015 μF	1

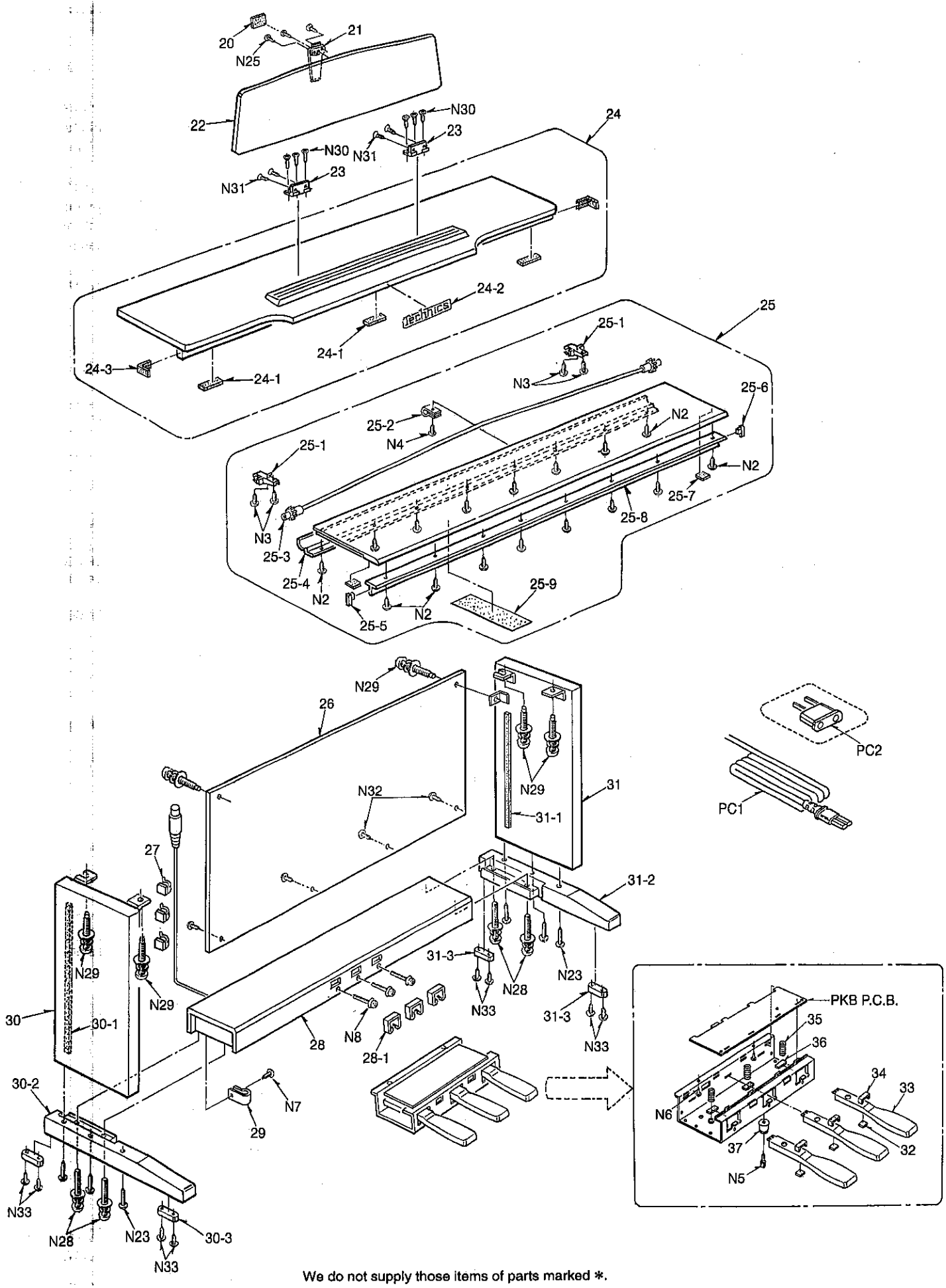
■WIRING PARTS

Ref. No.	Part No.	Description	P/S
○ W1 ⚠	QEXGVH03105C	CONNECTOR WITH WIRE	1
○ W2	QEXGZA34120A	CONNECTOR WITH WIRE	1
W3	QJLG013AA	PEDAL CORD	1
W4	QEXGSS10015A	CONNECTOR WITH WIRE	1
W5	QEXGSS07015A	CONNECTOR WITH WIRE	1
W6	QEXGSS12015A	CONNECTOR WITH WIRE	1
○ W7	QEXGSS06105B	CONNECTOR WITH WIRE	1
○ W8	QEXGST16060B	CONNECTOR WITH WIRE	1
W9	QEXGSS04075A	CONNECTOR WITH WIRE	1
○ W10	QEXGVH02045D	CONNECTOR WITH WIRE	2
○ W11	QEXGSS05060B	CONNECTOR WITH WIRE	1
○ W12	QEXGZA05030B	CONNECTOR WITH WIRE	1
○ W13	QEXGSS06015C	CONNECTOR WITH WIRE	1
W14	QEXGSS08025A	CONNECTOR WITH WIRE	1
○ W15	QEXGSS10022B	CONNECTOR WITH WIRE	1
W16	QEUGKCH06BB	FLAT CABLE	1
W17	QEUGK8H07BB	FLAT CABLE	1
W18	QEXGVH04080C	CONNECTOR WITH WIRE	1

■CABINET PARTS LOCATION



We do not supply those items of parts marked *.



We do not supply those items of parts marked *.

REPLACEMENT PARTS LIST.....Cabinet and Chassis Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retension period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.
2. ○ mark are new parts.
   Cabinet Colour
   • SX-PX336.....Black • SX-PX336M.....Walnut
3. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
4. For part No. with area mark, check the area when placing an order.
5. The raw material indication for synthetic resin
   In order to facilitate classification of parts of synthetic resin manufacture and to promote the recycling of natural resources, a raw material symbol for such parts is indicated in the Ref. No./ Material column.
6. The marking (※) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production; the item will continue to be available for a specific period of time.
7. "<IA>, <IB>, <IC>" marks in Remarks indicate language of instruction manual.
   [<IA>: English, <IB>: FRANCAIS, NERDALANDS, <IC>: DEUTSCH]

SX-PX336: CABINET & CHASSIS PARTS

	Ref. No.		Part No.	Description	P/S
			SPEAKERS		
○	SP1, 2		EAS16PL471D3	16cm, 8Ω	2
○	SP3, 4		EAS65PH31C3	6.5cm, 8Ω	2
			TRANSFORMERS		
	T1	⚠	QTPG1N025A	POWER TRANSFORMER, [EN, EK, EZ, EW, EF, EA, EP, EH, X, XL, XR, XS, XT, XD, XP, XW]	1
	T1	⚠	QTPG1N026A	POWER TRANSFORMER, [M, MC, XM]	1
			POWER CORDS & PLUG		
	PC1	⚠	QJAG027AA	POWER CORD, [EN, EZ, EW, EF, EA, EP, EH, X, XS, XT, XP, XW]	1
	PC1	⚠	QJAG028AA	POWER CORD, [EK, XD]	1
	PC1	⚠	QJAG029AA	POWER CORD, [XL, XR]	1
	PC1	⚠	QJAG025AA	POWER CORD, [M, MC, XM]	1
	PC2	⚠	SJP5213-2	ATTACHMENT PLUG, [X, XT, XP]	1
			CABINET PARTS		
○	1		QAQG032BAK	SOUND LOOPHOLE BOARD	1
	2		SBNG7050A	KNOB	2
○	3		QGPG0137AB	CONTROL PANEL	1
	4		QMFG1107AA	FELT (RED)	1
○	5		QKWG034AA	LED PANEL	1
○	6	ABS	QGPG0134AA	BUTTON	1
○	7	ABS	QGPG0135AA	BUTTON	1
○	8		QMFG4230AA	CUSHION	1
○	9		QMFG4231AA	CUSHION	1
	10		QMCG004AA	SPACER	9
	11		QLZG021A	CORE	3
○	12		QMRG5208AA	CUSHION	1
	13		QMRG5091AA	CUSHION	2
○	14		QMRG5200AAK	CUSHION	1
	15		SHRG1230A	CORD CLAMPER	2
	16		QLZG017A	CORE	5

SX-PX336M: CABINET & CHASSIS PARTS

	Ref. No.		Part No.	Description	P/S
			SPEAKERS		
○	SP1, 2		EAS16PL471D3	16cm, 8Ω	2
○	SP3, 4		EAS65PH31C3	6.5cm, 8Ω	2
			TRANSFORMERS		
	T1	⚠	QTPG1N025A	POWER TRANSFORMER, [EN, EK, EZ, EW, EA, EP, X, XL, XR]	1
	T1	⚠	QTPG1N026A	POWER TRANSFORMER, [M, MC, XM]	1
			POWER CORDS & PLUG		
	PC1	⚠	QJAG027AA	POWER CORD, [EN, EZ, EW, EA, EP, X]	1
	PC1	⚠	QJAG028AA	POWER CORD, [EK]	1
	PC1	⚠	QJAG029AA	POWER CORD, [XL, XR]	1
	PC1	⚠	QJAG025AA	POWER CORD, [M, MC, XM]	1
	PC2	⚠	SJP5213-2	ATTACHMENT PLUG, [X]	1
			CABINET PARTS		
○	1		QAQG032BAK	SOUND LOOPHOLE BOARD	1
	2		SBNG7050A	KNOB	2
○	3		QGPG0137AB	CONTROL PANEL	1
	4		QMFG1107AA	FELT (RED)	1
○	5		QKWG034AA	LED PANEL	1
○	6	ABS	QGPG0134AA	BUTTON	1
○	7	ABS	QGPG0135AA	BUTTON	1
○	8		QMFG4230AA	CUSHION	1
○	9		QMFG4231AA	CUSHION	1
	10		QMCG004AA	SPACER	9
	11		QLZG021A	CORE	3
○	12		QMRG5208AA	CUSHION	1
	13		QMRG5091AA	CUSHION	2
○	14		QMRG5200AAK	CUSHION	1
	15		SHRG1230A	CORD CLAMPER	2
	16		QLZG017A	CORE	5
○	17		QGKG0139AC	EXTERNAL JACK PANEL, [EN, M, MC, EK, EZ, EW, EA, EP, XL, XR, XM]	1

SX-PX336: CABINET & CHASSIS PARTS

Ref. No.		Part No.	Description	P/S
○ 17		QGKG0139AD	EXTERNAL JACK PANEL, [EN, M, MC, EK, EZ, EW, EF, EA, EP, EH, XL, XR, XP, XM, XW]	1
○ 17		QGKG0139BD	EXTERNAL JACK PANEL, [X, XS, XT, XD]	1
○ 18	PS	QKSGG030AAK	GUIDE	1
○ 19	PS	QKSGG031AAK	GUIDE	1
20		QMFG1083AB	FELT	1
21		SBLG7-2	STAY	1
○ 22		QKQGN936AAZ	MUSIC STAND	1
23		SBHG5003-2	HINGE	2
○ 24		QKQGA138AAZ	TOP COVER ASS'Y	1
○ 24-1		QMFG1274AA	FELT	3
24-2		SGBG160B	BADGE	1
○ 24-3		QMFG1278AA	FELT	2
○ 25		QKQGF037BAZ	KEYBOARD COVER ASS'Y	1
○ 25-1		QMRG7098AA	HOLDER	2
25-2		QWBG002AA	HOLDER	1
25-3		QXQG007AA	AXLETREE	1
○ 25-4		QGKG0154AA	ORNAMENT	1
25-5		QMRG7031DC	PROTECTOR	1
25-6		QMRG7032DC	PROTECTOR	1
○ 25-7		QMFG1277AA	FELT	2
25-8		QGKG0095AD	ORNAMENT	1
○ 25-9		QMRG2088AA	CUSHION	1
○ 26		QKQGD125AAZ	CROSS BOARD	1
27		SHRG9620A	CORD CLAMPER	3
○ 28		QKQGM098AE	PEDAL BOX ASS'Y	1
28-1		QGKG0113AA	ORNAMENT	3
29		SHRG1230A	CORD CLAMPER	1
○ 30		QKQGB515AA	LEFT PLANK ASS'Y	1
30-1		QMFG1203AA	FELT	1
○ 30-2		QAQG033AAK	LEG	1
30-3	PP	SHRG2130B-K	FOOT	2
○ 31		QKQGB516AA	RIGHT PLANK ASS'Y	1
31-1		QMFG1203AA	FELT	1
○ 31-2		QAQG034AAK	LEG	1
31-3	PP	SHRG2130B-K	FOOT	2
32		QMFG1135AA	FELT	3
33		QMWG4002AA	PEDAL ARM	3
34		QMFG1134AA	FELT	3
35		QMBG009AA	SPRING	3
36		QMFG1133AA	FELT	3
37		QKAG0011AA	FOOT	1
○ 38		QYKG248AA	CABINET ASS'Y	1
39		QMRG7086AA	LID, GUIDE	2
○ 40		QMRG5169AA	CUSHION	2
41		SBNG4010A	VOLUME KNOB	1
42		QQLG174AA	HEADPHONE LABEL	1
43		QAUG019AA	DISK DRIVE UNIT	1
44		QMFG1220AA	FELT	1
45		QMFG4103AA	CUSHION	1
46		QMGG029AA	FLOATING RUBBER	4
47		QEXGRA01007H	WIRE	2
○ 48		QMFG4234AA	CUSHION	1
49	⚠	SJS9231A	AC INLET COVER, [EN, EK, EZ, EW, EF, EA, EP, EH, X, XL, XR, XS, XT, XD, XP, XW]	1
49	⚠	SJS9334A	AC INLET COVER, [M, MC, XM]	1
50		QMRG5090AA	CUSHION	2
○ 51		QMRG5207AA	CUSHION	1
○ 52		QMRG5201AAK	CUSHION	1
○ 53		QMRG5199AAK	CUSHION	1
○ 54		QMRG5202AAK	CUSHION	1

SX-PX336M: CABINET & CHASSIS PARTS

Ref. No.		Part No.	Description	P/S
○ 17		QGKG0139BC	EXTERNAL JACK PANEL, [X]	1
○ 18	PS	QKSGG030AAK	GUIDE	1
○ 19	PS	QKSGG031AAK	GUIDE	1
20		QMFG1083AB	FELT	1
21		SBLG7-2	STAY	1
○ 22		QKQGN936ABZ	MUSIC STAND	1
23		SBHG5003-2	HINGE	2
○ 24		QKQGA138ABZ	TOP COVER ASS'Y	1
○ 24-1		QMFG1274AA	FELT	3
24-2		SGBG160B	BADGE	1
○ 24-3		QMFG1278AA	FELT	2
○ 25		QKQGF037BBZ	KEYBOARD COVER ASS'Y	1
○ 25-1		QMRG7098AA	HOLDER	2
25-2		QWBG002AA	HOLDER	1
25-3		QXQG007AA	AXLETREE	1
○ 25-4		QGKG0154AB	ORNAMENT	1
25-5		QMRG7031DC	PROTECTOR	1
25-6		QMRG7032DC	PROTECTOR	1
○ 25-7		QMFG1277AA	FELT	2
25-8		QGKG0095AC	ORNAMENT	1
○ 25-9		QMRG2088AA	CUSHION	1
○ 26		QKQGD125ABZ	CROSS BOARD	1
27		SHRG9620A	CORD CLAMPER	3
○ 28		QKQGM098AC	PEDAL BOX ASS'Y	1
28-1		QGKG0113AA	ORNAMENT	3
29		SHRG1230A	CORD CLAMPER	1
○ 30		QKQGB515AB	LEFT PLANK ASS'Y	1
30-1		QMFG1203AA	FELT	1
○ 30-2		QAQG033ABK	LEG	1
30-3	PP	SHRG2130B-K	FOOT	2
○ 31		QKQGB516AB	RIGHT PLANK ASS'Y	1
31-1		QMFG1203AA	FELT	1
○ 31-2		QAQG034ABK	LEG	1
31-3	PP	SHRG2130B-K	FOOT	2
32		QMFG1135AA	FELT	3
33		QMWG4002AA	PEDAL ARM	3
34		QMFG1134AA	FELT	3
35		QMBG009AA	SPRING	3
36		QMFG1133AA	FELT	3
37		QKAG0011AA	FOOT	1
○ 38		QYKG248AB	CABINET ASS'Y	1
39		QMRG7086AA	LID, GUIDE	2
○ 40		QMRG5169AA	CUSHION	2
41		SBNG4010A	VOLUME KNOB	1
42		QQLG174AA	HEADPHONE LABEL	1
43		QAUG019AA	DISK DRIVE UNIT	1
44		QMFG1220AA	FELT	1
45		QMFG4103AA	CUSHION	1
46		QMGG029AA	FLOATING RUBBER	4
47		QEXGRA01007H	WIRE	2
○ 48		QMFG4234AA	CUSHION	1
49	⚠	SJS9231A	AC INLET COVER, [EN, EK, EZ, EW, EA, EP, X, XL, XR]	1
49	⚠	SJS9334A	AC INLET COVER, [M, MC, XM]	1
50		QMRG5090AA	CUSHION	2
○ 51		QMRG5207AA	CUSHION	1
○ 52		QMRG5201AAK	CUSHION	1
○ 53		QMRG5199AAK	CUSHION	1
○ 54		QMRG5202AAK	CUSHION	1

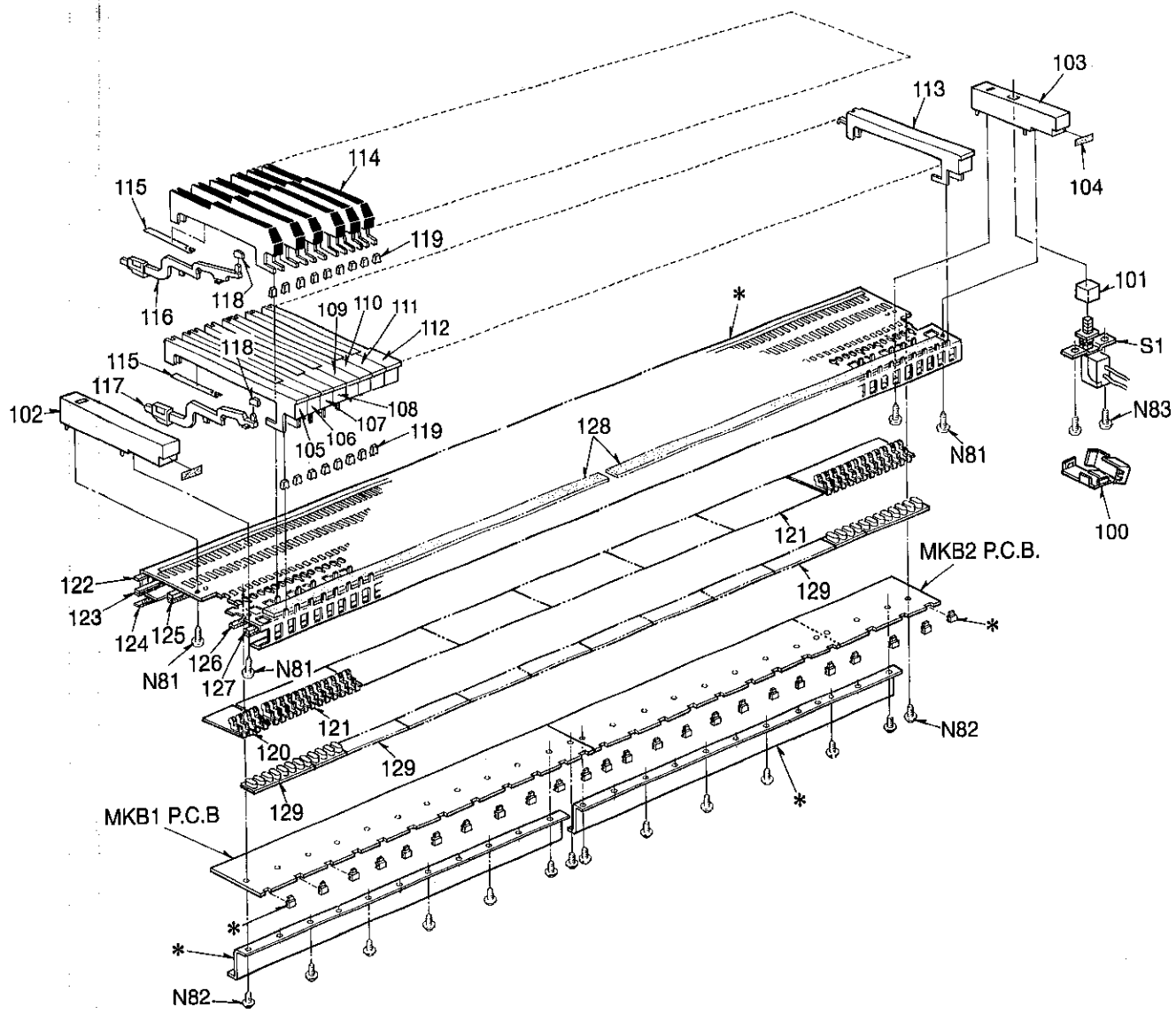
SX-PX336: CABINET & CHASSIS PARTS

Ref. No.	Part No.	Description	P/S
SCREWS & WASHERS			
N1	XNS12FZ	NUT	3
N2	XNS9	NUT	1
N3	QHDG043AA	SCREW WITH WASHER	4
N4	XTB4+10B	SCREW WITH WASHER	1
N5	XTW3+8J	SCREW	1
N6	XTT4+10A	SCREW	16
N7	XTB4+12A	SCREW	4
N8	XTB4+10B	SCREW	1
N9	XTT4+16A	SCREW	2
N10	XYN4+F16FZ	SCREW WITH WASHER	3
N11	XTB35+14A	SCREW	1
N12	XTW3+10Q	SCREW	26
N13	XTW3+20TFZ	SCREW	7
N14	XTWSG2	SCREW WITH WASHER	8
○ N15	XYA35+JA12	SCREW	8
N16	XTW3+10JFZ	SCREW	2
N17	XYN3+C8FZ	SCREW WITH WASHER	1
N18	XYN4+F25	SCREW WITH WASHER	8
N19	XTB35+10A	SCREW	3
N20	XYN4+F16	SCREW WITH WASHER	4
○ N21	XTT4+14A	SCREW	16
N22	QHDG021AA	SCREW WITH WASHER	10
○ N23	XYA35+JA12	SCREW	9
N24	XTW3+10JFZ	SCREW	1
N25	QHWG007AA	NUT	2
N26	XTT4+12AFZ	SCREW	2
○ N27	GTT4+25AFZ	SCREW	4
N28	XTS3+12AFZ	SCREW	6
N29	XTB35+16A	SCREW	10
N30	XTN4+50AFZ	SCREW	2
N31	XTB3+10AFZ	SCREW	3
N32	XTS3+10AFZ	SCREW	4
N33	XTT4+25A	SCREW	6
N34	XTB4+16A	SCREW	8
N35	QHDG016AB	SCREW WITH WASHER	6
N36	XTT5+20AFZ	SCREW	4
N37	QHDG032AB	SCREW WITH WASHER	4
N38	XTN4+16F	SCREW WITH WASHER	1
N39	XTW3+12QFZ	SCREW	4

SX-PX336M: CABINET & CHASSIS PARTS

Ref. No.	Part No.	Description	P/S
SCREWS & WASHERS			
N1	XNS12FZ	NUT	3
N2	XNS9	NUT	1
N3	QHDG043AA	SCREW WITH WASHER	4
N4	XTB4+10B	SCREW WITH WASHER	1
N5	XTW3+8J	SCREW	1
N6	XTT4+10A	SCREW	16
N7	XTB4+12A	SCREW	4
N8	XTB4+10B	SCREW	1
N9	XTT4+16A	SCREW	2
N10	XYN4+F16FZ	SCREW WITH WASHER	3
N11	XTB35+14A	SCREW	1
N12	XTW3+10Q	SCREW	26
N13	XTW3+20TFZ	SCREW	7
N14	XTWSG2	SCREW WITH WASHER	8
○ N15	XYA35+JA12	SCREW	8
N16	XTW3+10JFZ	SCREW	2
N17	XYN3+C8FZ	SCREW WITH WASHER	1
N18	XYN4+F25	SCREW WITH WASHER	8
N19	XTB35+10A	SCREW	3
N20	XYN4+F16	SCREW WITH WASHER	4
○ N21	XTT4+14A	SCREW	16
N22	QHDG021AA	SCREW WITH WASHER	10
○ N23	XYA35+JA12	SCREW	9
N24	XTW3+10JFZ	SCREW	1
N25	QHWG007AA	NUT	2
N26	XTT4+12AFZ	SCREW	2
○ N27	GTT4+25AFZ	SCREW	4
N28	XTS3+12AFZ	SCREW	6
N29	XTB35+16A	SCREW	10
N30	XTN4+50AFZ	SCREW	2
N31	XTB3+10AFZ	SCREW	3
N32	XTS3+10AFZ	SCREW	4
N33	XTT4+25A	SCREW	6
N34	XTB4+16A	SCREW	8
N35	QHDG016AB	SCREW WITH WASHER	6
N36	XTT5+20AFZ	SCREW	4
N37	QHDG032AB	SCREW WITH WASHER	4
N38	XTN4+16F	SCREW WITH WASHER	1
N39	XTW3+12QFZ	SCREW	4

■MANUAL KEYBOARD PARTS LOCATION

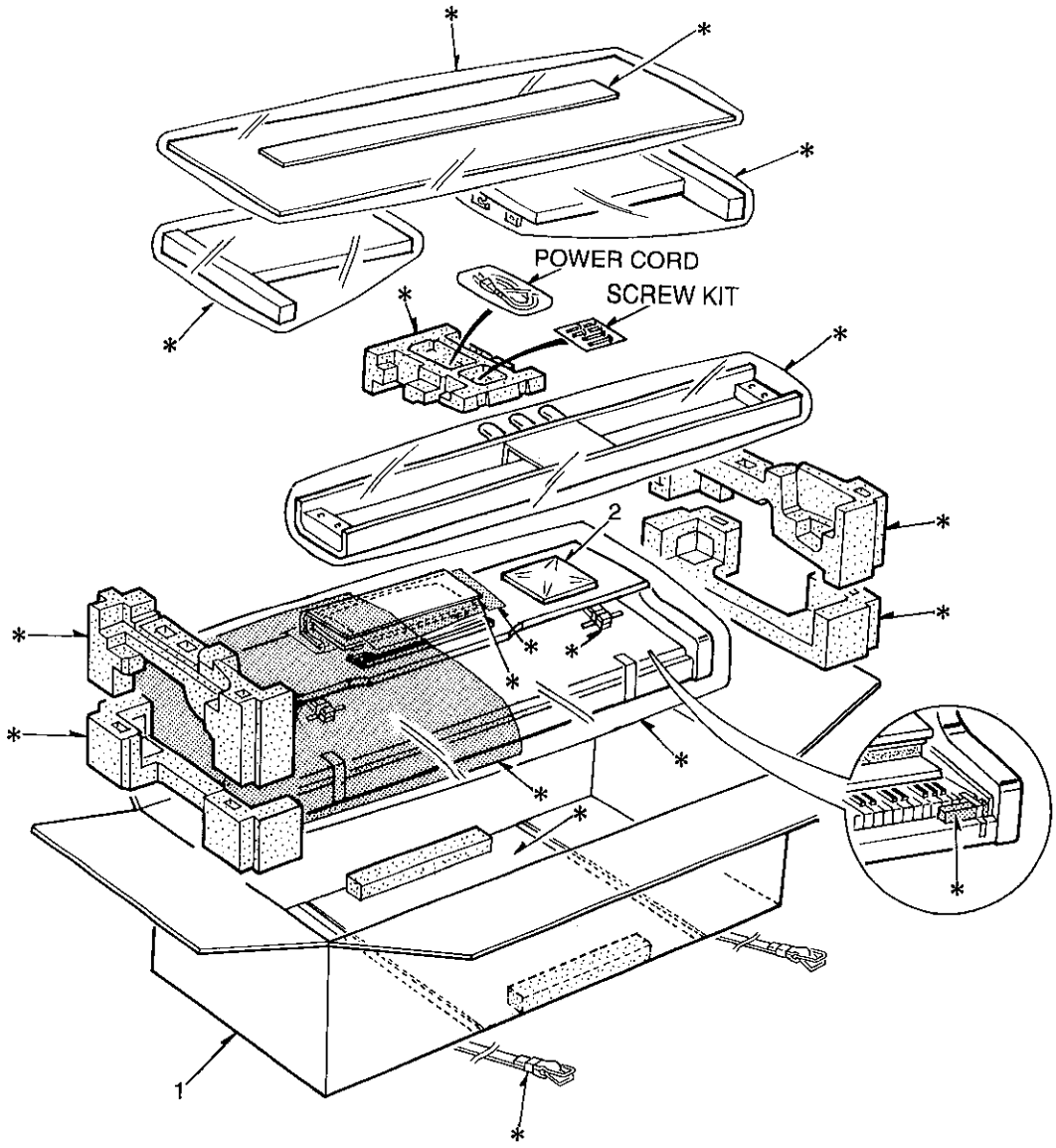


■MANUAL KEYBOARD PARTS

Ref. No.		Part No.	Description	P/S
SWITCH				
S1	⚠	ESB8273V	POWER SWITCH	1
MANUAL KEYBOARD PARTS				
100	⚠ PP	SHRG8390A	COVER, POWER SW	1
101	ABS	QGUG1040AA	BUTTON, POWER SWITCH	1
102	PS	QGPG0042AB	END COVER PANEL, LEFT	1
103	PS	QGPG0041CB	END COVER PANEL, RIGHT	1
104		QMFG1104AA	FELT	2
105	AS	QMWG1001AB	WHITE KEY (FIRST OCTAVE A KEY)	1
106	AS	QMWG1002AB	WHITE KEY (B KEY)	8
107	AS	QMWG1003AB	WHITE KEY (C KEY)	7
108	AS	QMWG1004AB	WHITE KEY (D KEY)	7
109	AS	QMWG1005AB	WHITE KEY (E KEY)	7
110	AS	QMWG1006AB	WHITE KEY (F KEY)	7
111	AS	QMWG1007AB	WHITE KEY (G KEY)	7
112	AS	QMWG1008AB	WHITE KEY (A KEY)	7
113	AS	QMWG1009AB	WHITE KEY (TOP OCTAVE C KEY)	1
114	AS	QMWG2001AC	BLACK KEY	36
115		SUSG534A	SPRING	88
116		QMWG8019CA	HAMMER (BLACK KEY)	36

Ref. No.		Part No.	Description	P/S
117		QMWG8017DA	HAMMER (WHITE KEY)	52
118		SHGG9121A	RUBBER CAP (HAMMER)	88
119	PA	QMWG8037AA	KEY GUIDE	88
120	ABS	QMWG8022AA	FULCURUM (4 PCS. ON ONE)	1
121	ABS	QMWG8021AA	FULCURUM (12 PCS. ON ONE)	7
122		SHRGA9080A	SPONGE	2
123		QMFG1073AA	FELT	2
124		QMFG1230AA	FELT	2
125		QMFG1101AA	FELT	2
126		QMFG1061AB	FELT	2
127		QMFG1231AC	FELT	2
128		QMFG1086AB	FELT	2
129		QMWG6006AA	RUBBER SWITCH (8 PCS. ON ONE)	11
SCREWS				
N81		XTB4+12A	SCREW	4
N82		XTW3+10T	SCREW	14
N83		XTV3+10C	SCREW	2

■PACKING



We do not supply those items of parts marked *.

■PACKING PARTS

Ref. No.	Part No.	Description	P/S
	PACKING PARTS		
○ 1	QPGG0442AA	PACKING CASE, PAPER, SX-PX336	1
○ 1	QPGG0442AB	PACKING CASE, PAPER, SX-PX336M	1
	OPERATING INSTRUCTION MANUAL		
○ 2	QQFGPX336AA	OPERATING INSTRUCTION MANUAL, [EN, EK, EP, X, XL, XR, XS, XT, XD, XP, XM, XW], <IA>	1
○ 2	QQFGPX336BA	OPERATING INSTRUCTION MANUAL, [M], <IA>	1
○ 2	QQFGPX336CA	OPERATING INSTRUCTION MANUAL, [MC, EF]	1
○ 2-1	QQTG0514A	OPERATING INSTRUCTION MANUAL, <IA>	1
○ 2-2	QQTG0516A	OPERATING INSTRUCTION MANUAL, <IB>	1

Ref. No.	Part No.	Description	P/S
○ 2	QQFGPX336DA	OPERATING INSTRUCTION MANUAL, [EZ], <IC>	1
○ 2	QQFGPX336EA	OPERATING INSTRUCTION MANUAL, [EW, EH]	1
○ 2-1	QQTG0516A	OPERATING INSTRUCTION MANUAL, <IB>	1
○ 2-2	QQTG0517A	OPERATING INSTRUCTION MANUAL, <IC>	1
○ 2	QQFGPX336FA	OPERATING INSTRUCTION MANUAL, [EA], <IC>	1

Printed in Japan
99042850 Ⓗ H.H./K.K.

Memo